COTTON CROP ESTIMATES

HEARINGS

BEFORE A

SPECIAL SUBCOMMITTEE OF THE COMMITTEE ON AGRICULTURE HOUSE OF REPRESENTATIVES

EIGHTY-SECOND CONGRESS

SECOND SESSION

ON

CROP ESTIMATES ON COTTON BY THE CROP REPORTING BOARD

JANUARY 22, 28, 29, AND FEBRUARY 4, 1952

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COTTON CROP ESTIMATES

TUESDAY, JANUARY 22, 1952

HOUSE OF REPRESENTATIVES,
SPECIAL SUBCOMMITTEE OF COMMITTEE ON AGRICULTURE,
Washington, D. C.

The subcommittee met, pursuant to notice, at 10:10 a. m., in room 1310, New House Office Building, Hon. Thomas G. Abernethy presiding.

Mr. ABERNETHY (presiding). The committee will come to order, please.

The purpose of our meeting is to look into the methods used by the Department of Agriculture regarding the manner and means of gathering statistics and making crop estimates, with particular reference to cotton.

Further, I might say that we are particularly interested in the wide margin of error which occurred in the Department's estimates on cotton production in 1951, for which there seems to be no precedent of any kind or character in the long history of the Crop Reporting Board. I might say that there does not seem to be any precedent for the tremendous dip that was made in the November and December reports. Ordinarily, by December the reports have leveled off considerably and they are generally in keeping with the actual yields.

There is nothing in the history of the cotton world that seems to have disturbed the trade or the producers as much as the errors which have been made by the Crop Board. The reports of the Department of Agriculture on production, for some reason, have a terrific effect on the market, even though the reports are more or less simple guesstimates.

Following the November estimates the market advanced considerably in price. It is well known that by that time many farmers throughout the belt had marketed their crop. It is also well known that there are many farmers, particularly the small farmers who frequently must market their crop at the time it goes through the gin.

Some of us have endeavored to arrive at the amount of cotton which had been marketed at that time. I do not know how accurate our estimates are. They might have been as far out of line as the estimates made by the Department as to the amount of cotton that was being produced; but, in any event, according to the judgment of myself and some others, the amount of loss to cotton producers, particularly small producers who had sold cotton up to and prior to the November report, amounted to a minimum of $130,000,000 and probably as high as $160,000,000 or $165,000,000.

As I said a moment ago, the estimates of the Crop Reporting Board might sometimes be referred to as "guesstimates"; but, in any event, they do have a terriffic effect on the market. They have a terrific

effect on the producer. Since they do have such an effect, and since the downward estimates for November and December are unprecedented and could happen again if the same methods are used, and since it has caused so much disturbance among the producers as well as the trade, I think it is incumbent upon the Congress and upon the Department of Agriculture—and I feel sure that the people from the Department are in full accord—that something should be done to improve and perfect the method of gathering information and making crop estimates.

The unprecedented error has caused many farmers, as I said a moment ago, throughout the belt to lose faith in the Crop Reporting Board and its methods of gathering and disseminating information. It can only be restored by full and complete airing of the subject here in this committee room or at some other place, affording the Department and those interested to explain, if they can, what happened and why it happened and offer some satisfactory explanation, if there is one.

It is not enough to say, "Gentlemen, the private estimators missed the crop, too."

Nor is it enough to say that the farmers missed it. It must be considered that neither the farmers nor the private estimators have at their hands facilities for gathering information as has the Department of Agriculture.

The Department of Agriculture is supported by officers and employees throughout the entire Nation. It has a very wide field to which it may resort to gather information. It has considerably more money available to be expended in gathering information of this kind than does any private agency.

So, I do not think it is enough to say, or a satisfactory explanation, that the private estimates missed it, too.

I have heard a good deal of that.

I concede that many of them did miss it, and I concede that many of the farmers might have missed it. However, after all, it is not the responsibility of the farmer to determine what the crop yield will be throughout the belt. It is the responsibility of the Department of Agriculture to make that determination. And, since it is the Department's responsibility, it certainly should endeavor in every way, shape, and form to make its estimates coincide, if at all possible, with the quantity of the crop that is to be produced.

Last year, as the result of the estimates which were made in August and September, the price was at a rather low level. In some sections I think it is fair to say the market price hardly covered the cost of production. These crops cannot be produced on the amount of dollars on which they were once produced. Labor is higher and materials are higher and insecticides are higher; poisoning is higher, and machinery is higher.

Mr. SIMPSON. And taxes are higher.

Mr. ABERNETHY. And taxes are higher, as the gentleman states. And there is now much less relationship between so-called parity and the actual cost of the production of a bale of cotton. I think that is not only true of cotton but of many other crops.

So, as a result of the estimates made in September and in August, a terrific campaign was put on all over the country by farmers themselves and by the Department of Agriculture—and rightly so, in my

judgment—encouraging farmers to use the loan and await a rising market.

I think it is also fair to say that, if they had not done that, the price would have dropped even further. But for their effort to stabilize and improve the price, utilizing the loan as the means, the opinions of many, not interested in agriculture and the cotton trade, came down upon our farmers. These objectors to the effort charged farmers with having gone on a strike, that they were refusing to market their cotton. I heard the present Director of the Office of Price Administration make the statement that he did not like the method that they were using. Even though the method was made available to them by Government to protect themselves against such things as they were experiencing last fall. Of course, he knows little about cotton or any agricultural product.

So that put a bad taste in the mouth of the people of the country against the producers of cotton. And against the producers of other crops also.

When you get the people mad at one segment of agriculture they are mad at all of the segments.

Some of the responsibility for the public attitude toward agriculture last year must be credited to the Department in the erroneous estimates which it made in August and September, which in turn brought on the holding movement.

It appears that not only were the estimates for the production of cotton unreasonably out of line but the estimates of the amount of acreage that was put to cotton was unreasonably out of line. I think there is some disturbance in the Department about its acreage figures.

I talked to one of the members in the Department who has been very helpful and very fair, and he has told me that he was disturbed about the acreage reports. We have all been disturbed.

We also are disturbed about the Department's estimates of acreage abandoned. It seems unreasonably high. There probably is a precedent for the estimate of acreage abandoned; but it is rather strange, gentlemen, that the 1951 figure was jumped all of a sudden in the last two reports to a very high abandonment. There is some feeling, as you know and as we know, that the Department knew this in September and charged it to bad weather, instead of revising immediately the acreage which they thought had actually been planted to cotton.

We want you gentlemen to touch on the high acreage estimates, and we want you to touch on the unusually high abandonment figures released in November and December. If it is at all possible to give the trade and the farmers a satisfactory explanation of this thing, that is what we want.

I realize that you are human, and I realize you are subject to error. I think it is realized by everyone that it is absolutely impossible for any agency, whether it be private or Government, to estimate with absolute accuracy just what may be produced in any given field of agriculture. It is easy to do in industry, or I should say it is much easier to do in industry, but it cannot be done with absolute accuracy in the field of agriculture. However, with the long history and experience of the Board, of the crop-reporting service, may I say I think it can be improved.

I think it is very unfortunate that we had the experience which we did last fall. It has disturbed the cotton-producing people of this country, and it has disturbed the trade.

I hope that in our efforts to work together that we may offer some reasonable explanation of this situation and that we may find some ways to improve it.

One other point, and then we will get into a discussion of the problem.

I have heard numerous farmers say that we ought to get rid of this crop-reporting and estimating service.

Some of them even feel that there may be some people in the Department of Agriculture—I do not make the charge; I am just passing on to you what they said to me last fall. Some of them feel that there may be some in the Department of Agriculture who are playing around with futures and on the Cotton Board. They realize that the crop-reporting service could afford some in the Department and possibly Members of Congress, if the information is prematurely made available to them, the opportunity to make a terrific killing on the market. And some of them believe that is going on. I am not making that charge. I do not want to be understood as making that charge. I am only bringing the information to you, so that you may know what is being said.

And others would say, "We think you ought to get rid of these crop-reporting people." I do not think so. I think it is a service which is essential to the producers and to the trade.

Furthermore, I think that the farmer has a better opportunity of a fair break through Government estimates than he would have through private estimates. There is no need of going into detail on that. I think we will all concede the point. I have had no trouble putting that over to my own farmers. When I expressed the view that they would have a better break with the Federal Board or with the Department of Agriculture they agreed.

So, it is certainly not our objective to get rid of something which we think is good. However, it is our objective to improve if it we can, and improve it I think we must.

We are glad to have Mr. Wells of the Bureau of Agricultural Economics with us at this time, and Mr. Newell. Maybe you gentlemen would like to give your names and your positions to the reporter.

Mr. Wells, I understand that you have a statement, which you may proceed with after identifying yourself.

Mr. WELLS. My name is O. V. Wells, Chief of the Bureau of Agricultural Economics, and this is Mr. S. R. Newell, Assistant Chief and Chairman of the Crop Reporting Board, Bureau of Agricultural Economics, Mr. C. E. Burkhead, Head, Division of Field Crop Statistics, Mr. J. J. Morgan, cotton statistician, Bureau of Agricultural Economics, and Mr. R. K. Smith, Vice Chairman of the Crop Reporting Board, Bureau of Agricultural Economics.

These gentlemen, Mr. Chairman, are the Chairman, the Vice Chairman of the Crop Reporting Board, and the two statisticians chiefly concerned with cotton estimates, and they are of course available to answer in detail many of the questions on which I am afraid I may need help.

I do have a prepared statement that I would like to read, if I may. It is a joint statement of myself and Mr. Newell as Chief of the Bureau and Chairman of the Crop Reporting Board.

Mr. ABERNETHY. You may proceed.

STATEMENT OF O. V. WELLS, CHIEF, AND S. R. NEWELL, ASSISTANT CHIEF, AND CHAIRMAN OF CROP REPORTING BOARD, BUREAU OF AGRICULTURAL ECONOMICS, ACCOMPANIED BY C. E. BURKHEAD, J. J. MORGAN, AND R. K. SMITH

Mr. WELLS. Mr. Chairman and gentlemen. We are pleased to have this opportunity to appear before you and discuss the crop and livestock reporting service.

We are genuinely pleased that you are going to take a look at the methods used by the Board. I think many times an outside look will bring to light things which we do not see ourselves, because we work at it day by day. I am more interested in the question of how we may improve the service than I am in an explanation of what may have happened, but the only way I know to start is to explain what happened and to suggest to you that you go through in detail what we are actually doing, so that you know what you are starting from.

The crop reporting service has been continuously estimating crop acreages, yields, and farm prices since the beginning of the Department of Agriculture some 90 years ago. It is important to point out that the Service was started by farmers and that farmers are still the primary source of information on which the periodical reports are based. That is, our crop estimates or forecasts are in effect a systematic summary of the estimates and forecasts of the farmers themselves, supplemented of course by such check data as we are able to obtain from time to time from other sources. We have assembled here in this folder, the various forms, and so forth, having to do with our cotton estimates. However, I do not think you will want to refer to this while I read the statement. There are copies available for each Congressman. And we will be glad for you and for the press to go through it.

Mr. ABERNETHY. Is it your intention to refer to certain specific items in that folder during the course of your testimony?

Mr. WELLS. Only incidentally.

Mr. ABERNETHY. It will not be necessary that they have it before them while you testify?

Mr. WELLS. No; I do not think it is necessary that you have it before you. It has in detail the material which is referred to in here, the documentation.

The basic law relating to monthly crop reports, a copy of which is in the folder before you, provides that—

> The monthly crop report * * * shall be gathered as far as practicable from practical farmers, etc., etc. * * * (7 U. S. C. 411a).

In order to facilitate your understanding of the methods and procedures used by the State statisticians and the Crop Reporting Board, we have prepared a folder of selected materials, which has been provided to each member of this committee, and the head of our Division of Field Crop Statistics, Mr. C. E. Burkhead, and others from the Service stand ready to explain these materials and procedures to you in detail.

Before going into such detailed explanation, however, we should, with your permission, like to make a short statement in order to help clarify, and perhaps answer, some of the questions which have been raised.

In the first place, every member of the Crop Reporting Service is very much aware of the responsibility which rests upon him in connection with the making and releasing of crop and livestock estimates. We are fully aware of the fact that the reports are used extensively by farmers as well as others who deal in farm commodities or are responsible for determining policies or enacting laws relating to agriculture.

We are aware of the fact, too, that many who use the reports frequently overlook some of their basic limitations. Specifically, our current reports are estimates or forecasts based upon the analysis of sample data and must be so interpreted. It must also be remembered that the monthly crop forecasts, especially during the earlier months of the growing season, are the best appraisals that can be made of the combined opinion of a large number of farmers as to crop conditions as of the first of each specific month, assuming that about average weather can be expected for the remainder of the season. As the growing season progresses, we obtain and use as much "check information" as may be available. But can it be said that a forecast made on July 1 or August 1, for example, which changes sharply on August 1 or September 1 is in error if during the interim hailstorms, floods, drouths, or ideal growing weather has destroyed large parts of the crop or materially improved the yield prospect? This weather factor must always be borne in mind in appraising crop estimates or forecasts during the growing season. So far, we know of no possible way to eliminate it.

This committee is chiefly concerned with cotton. But we do want to point out that in dealing with one crop we also have to be aware of others as well. There are 41 statistical field offices, each of which is an integrated office responsible for the entire work of the Crop and Livestock Reporting Service in the State or States covered by the office. The office in Georgia or Mississippi or Illinois, for example, must cover all the crops grown in the State. Cotton, therefore, is one of several crops and an estimate of cotton acreage, for example, does depend to some extent on the acreage estimates for other crops. It is also a fact that the resources which can be devoted to estimates for any one crop or livestock item must be related to the total workload of the State and Washington offices.

There is in your folders a chart showing the release dates for the various reports turned out in 1951. This chart will give you an idea of the scope of the Crop Reporting Service. Very briefly, more than 500 different reports are released each year which means practically two reports for each working day. We have also included a chart showing the sources of information used by the Service and the flow of these reports through the State offices, the Crop Reporting Board, and out to the users.

A question that is frequently asked is: "How do you get reporters?" The answer is many sources are used. We draw names from State assessors' records or censuses, from lists compiled in State Production and Marketing Administration offices, from lists built up through the use of rural mail carrier surveys, and from names suggested by county agents and our regular crop reporters.

Mr. ABERNETHY. On page 2 you stated in substance that your reports in the early part of the season, August and September, of course, were dependent upon reasonable weather conditions.

Mr. WELLS. Yes, for the rest of the season.

Mr. ABERNETHY. We concede that. Therefore, during the history of the Service with regard to all crops your margin of error in the early part of the season is reasonably high, that is, I should say, it is higher than it is at the end of the season.

Mr. WELLS. Correct.

Mr. ABERNETHY. But I think we should point up right here that that was not necessarily the case this year. The error was at the end of the season, instead of at the first of the season.

Mr. WELLS. Mr. Chairman, I have later a month-by-month description of what we think happened in cotton.

Mr. ABERNETHY. But your line was never off at the end of the season, generally speaking, except in 1951.

Mr. WELLS. As a rule, the accuracy increases during the season.

Altogether, several hundred thousand farmers—about 600,000—send in one or more schedules or reports to our State statistician each year. Some 90,000 or more of these are what we might think of as regular crop reporters—that is, farmers who send in several schedules during the year and who continue reporting over several years.

We are extremely proud of the cooperation and trust of these farmers who serve as crop reporters. They do the job voluntarily because they believe that an accurate reporting system is worth while, and are willing to make a personal contribution. It is the kind of service and cooperation which money cannot buy and which we are certain is as unbiased a source for basic statistical materials relating to farmers as anyone can find.

The Crop Reporting Board does try to see that the reporters are so distributed for particular crops, classes of livestock, or other items, as to obtain a fair cross section of the various areas within each State and, as the State totals are combined, a representative picture for the United States.

Mr. ABERNETHY. At the top of the page you state that there are around several thousand farmers, about 600,000, who send in one or more schedules or reports.

Mr. WELLS. A year, yes.

Mr. ABERNETHY. Each year?

Mr. WELLS. Yes.

Mr. ABERNETHY. And as I understand, there are about 90,000 of those who do so regularly?

Mr. WELLS. From month to month.

Mr. ABERNETHY. From month to month?

Mr. WELLS. They continue to send reports.

Mr. ABERNETHY. Do I understand you to mean that you secure these reports annually and monthly?

Mr. WELLS. Yes.

Mr. ABERNETHY. From each of those 600,000 farmers, or do you vary them from different ones?

Mr. WELLS. They are varied. All I am saying is that during the year, Mr. Chairman, we as a rule send out almost 9 million—I think the estimate for the last year was 8,800,000 schedules or questionnaires which were sent to farmers and tradesmen, and we get back one or more schedules each year from about 600,000 farmers. Many of those are simply one-time mailings to a selected list to answer a particular question.

Mr. ABERNETHY. Let me ask this question. If I received one of these schedules and I send it in in August, do you send another one back to me in September?

Mr. WELLS. We may or may not, Mr. Chairman. It depends.

We have certain schedules which we only mail out one time to a selected list.

Then we have what we call our regular or monthly crop report schedules.

We do try to build up a list of dependable, regular reporters. And we send schedules back to these month by month, yes.

Mr. ABERNETHY. That same method is used among the wheat farmers and the corn farmers, the potato farmers, and so on?

Mr. WELLS. It is the basic method for our entire crop and livestock estimating system on crop acreage, yields, and livestock numbers, yes, sir.

Mr. ABERNETHY. All right, you may proceed.

Mr. WELLS. This problem of recruiting and maintaining adequate and representative lists of reporters is a difficult and continuing job. Frequently one-time survey questionnaires are simply sent out to a selected list of names, but we do endeavor to send letters to many of them asking if they are willing to become regular reporters.

We personally contact them as far as our men in the field have time to do so.

Mr. ABERNETHY. Who makes the contact?

Mr. WELLS. The State statistician or his various assistants, in traveling through the States. We have reporters who have reported continuously for 30 or 40 years, in some cases.

Mr. NEWELL. We had a ceremony out in Kansas the other day, Mr. Chairman, at which we honored 32 crop reporters who had been serving continuously for 35 years or more. One of them had continuously served for 52 years, and several or a little more than half of them had served for more than 40 years.

Mr. ABERNETHY. Do they get pay for that service?

Mr. NEWELL. No, sir. That is a voluntary service, Mr. Chairman. There is no pay for it.

Mr. WELLS. We do send them back some reports. There is no pay, however.

There are several laws relating specifically to cotton estimates. These laws specify the dates and manner in which cotton reports shall be released and also require that the first estimate of cotton acreage be in terms of acreage in cultivation on July 1, which is different from that for other crops and causes a problem that you may want to discuss later.

There are attached to this statement tables showing estimated cotton production as of the 1st of each month from August through the growing season, by years from 1915 into 1951, compared with or expressed as a percentage of final ginnings—except for the percentage comparisons for 1951. A similar table for cotton acreage is also attached and for comparative purposes, similar production tables for corn and wheat.

We believe a study of these tables will indicate that our estimates for cotton have been relatively accurate over the years, but you will also find some differences between the August and final estimates for previous years which are in line percentagewise with or greater than

that shown to date for 1951—specifically, 1945, 1937, 1935, 1932, 1926, 1925, and 1923.

Mr. ABERNETHY. You have reference there, of course, to the average annual?

Mr. WELLS. The difference between the first August forecast and the final estimate of ginnings which was released, I believe, in May of each year. We have attached the table. We thought that instead of going into the question of how great the differences had been, the simplest way was to show the statistical record. We have made available that information already to the clerk of your committee.

Mr. ABERNETHY. That is not responsible for the unprecedented drop in November and December of 1951?

Mr. WELLS. That is right. I will come to that as I move on here.

The first cotton report released each year estimates the acreage of cotton in cultivation on July 1. This report covers acreage only, not yields or estimated production. Early in the year—that is, this spring—it was quite evident that there would be a large increase in the acreage of cotton planted. We knew that it is difficult in years of very sharp changes to measure the exact extent of the increase or decrease. For this reason our crop reporter list was expanded or supplemented by securing an additional list of about 100,000 cotton growers by taking every tenth name from the county lists of all cotton growers maintained by the Production and Marketing Administration.

That list is for marketing quota purposes, as you are well aware, Mr. Chairman.

All of the information obtained from the old and new lists fully supported the July estimate of acres in cultivation which was released July 9.

There were some factors in the early spring weather which made it extremely difficult, however, to be sure just how the farmers had interpreted the question on acreage in cultivation on July 1. In northwestern Texas and southwestern Oklahoma heavy rains during May and June had washed out considerable acreage. Replanting to cotton continued into late June, but after that most of the cotton acreage that had been lost was replanted to sorghums. In Arkansas, Tennessee, the Delta district of Mississippi, northern Louisiana, and Alabama, droughts prevailed during May and considerable cotton did not come up until mid-June. Frequent rains followed and prevented cultivation so that fields became excessively grassy and some acreage was either abandoned or replanted to other crops prior to July 1. With these unusual conditions prevailing, it now seems likely that the reports used for establishing the July 1 acreage in cultivation included some acreage that was on the borderline or actually abandoned before July 1.

Mr. ABERNETHY. When did you discover that?

Mr. WELLS. Well, as I come on down here you will note we have a resurvey, completely new, of acreage prior to the December crop report which led us, together with the ginnings record, to conclude that we had overestimated the acreage.

Now ever since, I think 1912, Mr. Chairman, this problem of acreage in cultivation July 1 has on occasion raised real questions as to what the farmers consider as abandoned on July 1. I do not think it is a major factor, but one which your committee will want to examine as you bet into it.

Mr. ABERNETHY. Did you discover that by the time the September report came around?

Mr. WELLS. No, sir.

Mr. ABERNETHY. It was not discovered then?

Mr. WELLS. I would rather that the members of the board would answer that, but my answer is, No, sir.

Mr. ABERNETHY. This was based on information supplied by farmers as of July 1—it was supplied actually at what time, in mid-July?

Mr. WELLS. The questionnaires are sent out and the farmers are asked to fill them in on or about July 1.

Mr. ABERNETHY. By mid-July the information was in?

Mr. WELLS. It was in prior to the release of the cotton report on July 9.

Mr. ABERNETHY. On July 9 the information was in?

Mr. WELLS. Yes.

Mr. ABERNETHY. Subsequent to that you learned, as you have stated in that paragraph, that due to heavy rains, wash-outs, and so on, that there had been a considerable abandonment.

How soon did that information come to the Department?

Mr. WELLS. Most of it came in November, as you will note as I move on through my paper.

Mr. ABERNETHY. All right.

Mr. WELLS. We have two large rounds of mailing acreage surveys, one prior to July 1 and one prior to December 1. And in between we do not ask farmers about acreage except for abandonment, which I will come to in the discussion. That is why I think you want to look at the procedure, and then after you have seen the procedure I think you will understand better some of the problems involved.

The first production forecast is as of August 1, based on the July 1 acreage estimate corrected for the 10-year average abandonment between July 1 and actual harvest and estimated yield prospects as of August 1. The Board's August estimate was 17,266,000 bales—500 pounds gross weight.

The second production forecast as of September 1 is based in part upon an actual survey of abandonment following July 1 as reported by crop reporters on September 1. For the September report our inquiry to farmers indicated an abandonment of 3.3 percent, but the condition and yield prospects reported by farmers still indicated a total crop of 17,291,000 bales.

Mr. ABERNETHY. You say for the September report that from inquiry of farmers it indicated an abandonment of 3.3 percent.

Mr. WELLS. From the acres in cultivation on July 1.

Mr. ABERNETHY. Was that reflected in the report?

Mr. WELLS. In the September report.

Mr. ABERNETHY. That abandonment?

Mr. WELLS. Yes, sir, in the September report.

Mr. ABERNETHY. I thought it was two-something.

Mr. NEWELL. No, it was 3.3 percent. That was the abandonment. The September 1 abandonment was 3.3 percent.

Mr. WELLS. What was the August average?

Mr. BURKHEAD. A little over 2 percent.

Mr. ABERNETHY. A little over how much?

Mr. NEWELL. Two percent.

Mr. WELLS. The 10-year average, in making the August estimate——

Mr. BURKHEAD. It was 2 percent.

Mr. ABERNETHY. I am confused. You say it was 2 percent, and you say it was 3.3 percent.

Mr. ALBERT. They are different things.

Mr. NEWELL. The 10-year average abandonment runs about 2 percent.

Mr. WELLS. That was used in August.

Mr. ABERNETHY. I understand now.

Mr. WELLS. The question has been raised on several occasions as to the source of information on abandonment. This information is collected from farmers themselves. There are two reports specified in the law (7 U. S. C. 476) to be issued on September 1 and December 1, both to relate to "the acreage of cotton abandoned since July 1."

I am trying to outline the standard procedure we follow from year to year. The law does provide that there will be two estimates of abandonment and specifies the dates.

Meanwhile, during September many, in fact most, of the outside forecasts which came to our attention indicated that the September estimate was conservative and that the official October 1 forecast would probably go up between 200,000 and 300,000 bales. By October 1, however, farmers were apparently realizing that the continuing drought, particularly through the northern areas of the Eastern Belt and in Texas and Oklahoma, was resulting in greater injury than they had previously expected and that the outturn of a large acreage of late cotton was in doubt. While there was a fair set of bolls, considerable shedding was observed and bollworm damage in late cotton began to be evident. The October report also takes into account a first report from ginners.

Let me digress to say that through September we used indications from farmers. We get a first report from ginners in October as to how much cotton they have ginned to date together, I believe, with a statement as to how much or what they think the prospects are for continued ginning.

Mr. NEWELL. We get the bales ginned to October and the additional bales they still expect to gin; that is right.

Mr. WELLS. At this point we begin to introduce what we call check data on the farmers' estimates.

Ginnings to October 1 were apparently running a little later than usual.

That was expected because of some of the late plantings and replantings.

Taking these various indications into account, the Board's October 1 forecast showed a total decline of 360,000 bales from the September forecast.

During October, drought continued, picking of late cotton got under way, and while there was a fair set of bolls, many opened prematurely and produced shrunken, immature locks of little value. The reports from farmers on November 1 revealed this sharp deterioration in yield prospects. Ginners' reports also bore out the sharp decline that had taken place in the late cotton, particularly in the Central Belt States, and also suggested that the acreage for harvest as estimated in September was too high. These were the indications which caused the Board

to reduce the November estimate by 1,160,000 bales below the estimate as of October 1.

Some of you may recall that early in November freezes occurred in the northern part of the belt, particularly in Arkansas, Oklahoma, and Texas. The November report pointed out specifically that the effects of this freeze had not been taken into consideration in the estimate for November 1.

The farmers fill out their schedules within a day of the 1st of the month. We release our cotton reports, as a rule, the 8th of the month. Between the 1st of the month and the 8th of the month the schedules must come from the farmers to the State statisticians offices, they must be summarized and interpreted by the State statistician, sent to Washington and interpreted there. In addition we always have occurring between the 1st and the 8th of the month, as a rule, two nonwork days, in other words, a week end, and sometimes 3 days, where if we work we have to pay overtime, and with the drive for economy, paying overtime is not the best practice. So that our reports as released on the 8th of the month, as a rule, are based as nearly as we can on conditions prevailing on the 1st of the month as reported to us by farmers, or, from October on, also taking into account the check data from ginners.

And in the November report we pointed out that we were aware of a sharp freeze having occurred in certain parts of the belt and our comments said the effects of this freeze were not taken into account in the November estimate.

As a rule, we handle weather developments between the 1st and the 8th of the month by comments which accompany the report saying that this has occurred and this has occurred and calling attention to the fact that it is not taken into account.

Mr. ABERNETHY. Mr. Wells, there was information available to the Board or to the Department, I should say, that when the November report was made which already showed in the minds of those who make the report that there would be a reduction of 1,160,000 bales, that there would be a further reduction in December. Since they knew that, why was that not taken into account at that time in making the November report? In other words, here was information that was available to the Department. They recognized it by stating in the November report, so you say, that these freezes were going to make the reduction come in December even more. So why was it not taken into account?

I do not see how you can avoid not taking it into account.

Mr. WELLS. They are not based on personal judgment. We knew the freeze had occurred. How much it may or may not have damaged the cotton, we did not know and so our comments said.

Mr. ABERNETHY. You assumed that it had damaged it some?

Mr. WELLS. Our comments said in so many words it had not been taken into account. And we told everybody right along it had not been taken into account. So they were all informed.

Mr. ABERNETHY. You knew some damage had been done.

Mr. NEWELL. I would like to interject there as to the freeze damage, we knew there had been some damage, but freeze damage is sometimes very fickle. It is very difficult for anybody to appraise it immediately after it occurs.

Mr. ABERNETHY. But you did put the trade and producers on notice, though.

Mr. WELLS. That it had occurred.

Mr. ABERNETHY. That it had occurred?

Mr. NEWELL. That is right.

Mr. ABERNETHY. It was your intention to suggest that there would be a further reduction in December—was that your intention?

Mr. NEWELL. We did that on purpose, to let them know we were aware of the freeze, but we could not, in the short time available, make an objective appraisal of what the extent of that damage was.

I have seen the times when some crops were reported as severely damaged by a freeze and later on we have discovered that the damage was nowhere near what it looked like it would be a few days afterward. That is particularly significant in some crops.

Mr. ABERNETHY. All right, let me put it the other way. Did it influence you then in making the 1,160,000-bale reduction?

Mr. NEWELL. No, sir; we worked on the basis of the reports we had and on the basis of the information we had that would permit us to make an objective forecast as of November 1.

Mr. ABERNETHY. Quite often I have heard a witness testify in a court room to something that was incompetent that would be objected to, but the jury would already have heard it. The judge would turn to the jury and say, "Now, gentlemen, do not consider that." And you know they cannot help but consider it.

I am just inclined to believe that you almost had to consider it and that you, probably, did consider it. Am I right about that or not?

Mr. WELLS. On that point, Mr. Chairman, that is why I am going to suggest at the end that you go through in detail the procedures that are used, because I think when you get into the mechanics of summarization——

Mr. ABERNETHY. I do not want to put everything off to the end.

Mr. WELLS. When you get to the mechanics of summarizing these reports from farmers, by States and releasing a national report within 7 or 8 days after the farmers fill their schedules out, you will find there is very little time in which these people have to inject their personal judgments.

Mr. ABERNETHY. Not that I put absolute faith in any predictions made by anyone on crops, whether it be cotton, corn, wheat, peanuts, rice, or what not—it is a fact, however, that on the morning after this November report was made that every so-called expert specifically predicted and stated that the December report would definitely reflect a further reduction.

Do you agree with that, that that appeared in the press?

Mr. WELLS. A great many of them certainly did.

Mr. ABERNETHY. You did not see any that said it would be more. I did not. I do not think anyone did. Therefore, since they were so certain about it, and since the Department pointed their finger to the very prospect that there would be a further reduction come December 1, I cannot understand why it did not influence the Department in making its November report. They had the information. It was there. It was available.

It is the object of the Department to make an accurate report, if it can. And so I cannot understand how it was excluded.

Mr. WELLS. But our reports are as accurate and objective as we can make them and are tied as specifically as we can make it to con-

ditions on the first of the month as provided by law. I would like the privilege of checking this.

Mr. ABERNETHY. In other words, you did just as the judge instructed the jury?

Mr. WELLS. I think, Mr. Chairman, I would like to check on this, but I believe the law specifically says the report shall relate to conditions as of the first.

Mr. ALBERT. Can the law be changed?

Mr. WELLS. It can. And that is why we are bringing this to your attention. In considering it I think you have got to consider the question as to how far you follow the reports which we get from representative farmers, and how far you want to trust personal judgment.

And let me point out that as the Chief of the Bureau of Agricultural Economics I do not sit with the Crop Reporting Board. I think it is part of my function to isolate and insulate them from a great many opinions of experts and well informed people. All of the experts who called me, or whose statements came to my attention were confidently reporting that the October report would be two to three hundred thousand bales higher and, actually, the Crop Reporting Board lowered its forecasts in October by 360,000 bales and in my opinion the experts were considerably more confounded by the October drop than they were by the November drop. All I am saying is that only 5 weeks before the November report they had been confident that the Board was underestimating and the crop was going up.

The October turn having occurred and having checked and found that it had turned, they were equally confident it would go down. And they had the freeze in early November.

Mr. ABERNETHY. You can see they did not have the information available that the Department had.

Mr. WELLS. That we freely admit.

Mr. ABERNETHY. It may, also, be said that the experts have a pipeline to the Department or do have occasionally, and they get some of the information out of the Department, just as the gentlemen did who called you.

Mr. WELLS. Those calls came to me.

Mr. ABERNETHY. I perhaps should not use the word "pipeline" because it may indicate something improper. I mean they do call on the Department for some information and when they get that information they incorporate that in their own estimates.

Mr. WELLS. They do call us, Mr. Chairman.

I say that as Chief of the Bureau of Agricultural Economics I do not sit with or endeavor to influence the statistical judgment of the Crop Reporting Board. And one reason I do not do that is because many people do call me. And I do consider it my business to insulate the crop report staff from such calls as far as possible. But the Bureau of Agricultural Economics, working with the State Extension Services, through our contact with the farm organizations, the farm press, and so forth, tries to see to it that the whole world knows what we think and why. We are the one people who say what we think. And so everybody can second-guess us.

Mr. JONES. I want to make a statement here to see if I have correctly interpreted this. This statement is based upon an experience I had 2 years ago when I had occasion to go down to the Bureau of Agricultural Economics to inquire into the methods that were used.

As I understand it, Mr. Wells, and Mr. Newell, your estimates are based entirely upon the reports sent in by the farmers and regardless

of any personal opinion that you might have as to the correctness of the reports sent in by the farmer. You go entirely by that as if it was a mathematical equation presented to your Board, is that right?

Mr. NEWELL. You are getting into a little of the details of the operation here, Mr. Jones. We do base our information primarily on the farmers.

There is just one addition, I would say there, plus such check information and in this case, for example, ginnings.

Mr. JONES. What I am getting at is this. In other words, using the information or the figures that were presented to you as of November 1, it has been the policy of this Board over a long period of years not to attempt to use your opinion in what has happened between November 1 and the date of the release which is usually 8 days later?

Mr. NEWELL. That is correct.

Mr. JONES. And that in this particular instance the comment that you made was to indicate that you had not been influenced by anything that had taken place following November 1; that you were using the figures that were given by the farmers, and that while your personal judgment might be different, that you wanted to indicate that you were using the farmers' figures, and that you merely made this other comment that there had been a freeze which occurred between November 1 and November 8, and then it was up to the individual reading that report to put his own estimate on how much that estimate would be affected. Is that correct?

Mr. NEWELL. That is right.

Mr. JONES. Another thing I think that should be made very clear here is the fact, as I understand it, that all of this information that comes into the Crop Reporting Board is of a confidential nature to the extent that these reports that are used by the people who are to analyze and make the report are even locked in the room to prevent any outside influence from coming in, that no one has access to that information, and that even the people inside have no way of putting that information outside?

Mr. NEWELL. That is right.

Mr. JONES. Is that correct?

Mr. NEWELL. That is right.

Mr. JONES. And so far as anyone having any information between that period of time that the report comes in as of the 1st of the month, first, you cannot get those until they have cleared through the State offices and there is bound to be a period of, say, 2 to 3 to 4 days before you get the information in Washington, and during that period until the report is released, no one has access to that so that it could be made public and it is published simultaneously to everyone at that time, is that not correct?

Mr. NEWELL. That is correct.

Mr. JONES. I just thought that should be in the record here.

Also, I think another thing should be in there, the fact that this year you followed the same procedure that has been followed in previous years and conforming to the law that Congress enacted?

Mr. NEWELL. That is right.

Mr. JONES. That on the basis of your past reports which I think we all agree have been unusually accurate, that you had no reason to follow a different procedure this year than you did in past years?

Mr. NEWELL. That is right.

Mr. JONES. Thank you, Mr. Chairman.

Mr. WELLS. The effect of this early November freeze, of course, was reflected in both farmers' and ginners' reports as of December 1. Meanwhile, results of completely new surveys of acreage and abandonment since July 1, made each year by the Crop Reporting Board as a basis for the December report, became available and, on the basis of these indications, the July 1 acreage estimate was revised. These new acreage surveys indicated that the earlier July estimates had been too high by about 5 percent and it was the result of this additional acreage material, together with December 1 indications from farmers and ginners, which led to the December estimate of 15,290,000 bales, a reduction of 481,000 bales as compared with the estimate of November 1.

If we endeavor to very briefly summarize the reasons for the differences between the August and December production estimates, it appears that well over half, perhaps as much as two-thirds, of the difference was the result of unusual weather which prevailed from planting to harvest time.

In addition to the material bearing on some of the questions relating to changes in the cotton estimates, we also understand the committee wished to have available a table showing changes in cotton prices. There is attached a table showing both the closing prices for nearby futures on the New York Cotton Exchange and an average of daily prices in the 10 spot markets, by days, April through December 1951.

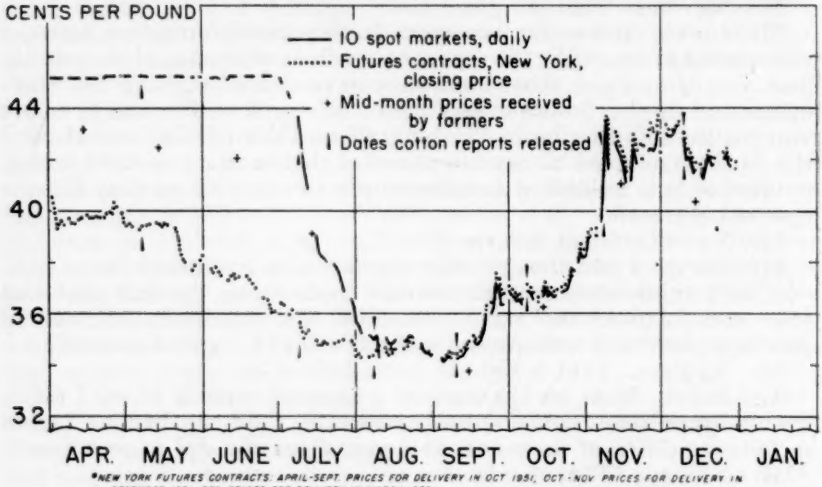
I had a chart of that drawn for you. I am sorry I do not have small copies, but we will be glad to make the chart available to you and we will have it reproduced, if you want it for the record.

Mr. THOMPSON. Is that a comparison between the prices and the estimates?

Mr. WELLS. It is just a straight chart showing daily and future prices for cotton. I will summarize what it shows in the paper.

(The chart is as follows:)

COTTON PRICES: 10 SPOT MARKETS AND NEW YORK FUTURES*, DAILY AVERAGES°, APR.–DEC. 1951



*NEW YORK FUTURES CONTRACTS: APRIL-SEPT. PRICES FOR DELIVERY IN OCT. 1951; OCT.-NOV. PRICES FOR DELIVERY IN DECEMBER 1951; DEC. PRICES FOR DELIVERY IN MARCH 1952.

°FOR MIDDLING 15/16 INCH

Mr. ABERNETHY. Mr. Wells, I would like to ask you this question. I think this is the crux of what you have said in the past few paragraphs here.

You have indicated that if the weather conditions from the 1st of October to the 1st of November had been favorable the Department would have adhered to its October report which was 1,161,000 bales above the November report.

As I interpret your statement the weather conditions were so bad between October 1 and November 1 that the Department felt constrained to reduce the estimates by 1,160,000 bales.

Mr. WELLS. Well, I think what I have tried——

Mr. ABERNETHY. You cannot go behind October 1 now, because you had already made your report on October 1.

Mr. WELLS. Yes.

Mr. ABERNETHY. You stood on that.

Mr. WELLS. I think what I have tried to say is that weather conditions were such that there was quite a bit of late cotton, and when they began to pick that cotton out, it did not gin out. And that is what the farmers and the ginners both discovered during the month of October.

I think the failure of the cotton to pick and gin out traces back through the season, but I think the realization of that failure to pick out, our first indication, came in the October report which reduced it 360,000 bales, and then ginnings had advanced far enough in November to make it quite clear that the cotton was not ginning out and the farmers were discovering it as well as the ginners.

Mr. ABERNETHY. I do not want to be misinterpreted as being critical and trying to find fault in what you say. We are trying to get together on what happened here.

You have indicated in your statement, or the Department has indicated in its statement, that the weather conditions subsequent to the October 1 report which was made several days later, or made as of October 1, was that the weather conditions were so bad over that 30-day period that the Department felt constrained to reduce its estimates by 1,160,000 bales. In other words, the weather conditions in October were so bad that it reduced the crop by 1,160,000 bales.

Is that not what is in your statement?

Mr. WELLS. What I tried to say was that the weather conditions prior to November created an uncertain situation in October, and the realization on the part of the farmers, the ginners, and the Department of the total effect of weather in terms of how the cotton was picking and ginning out came during October, Mr. Chairman. That is what I tried to say.

It is not tied entirely to the weather conditions in October by any means, but to late weather.

Mr. ABERNETHY. I would like to yield to Mr. Heimburger for just 1 minute on that.

Mr. HEIMBURGER. Mr. Wells, it is difficult to take these weekly reports of the Weather Bureau and summarize them in a concise manner, but in going over the weekly weather crop bulletin which the Weather Bureau puts out, in general their statement on cotton indicates that there was constant deterioration, premature opening of the bolls during July and August. There was continual warning by the Weather Bureau in their weekly bulletin that there was cotton

deterioration on account of the dry, hot weather up until their bulletin of September 18, at which time they report rather generous showers over the entire Cotton Belt, late cotton in the northern interior areas benefited, the premature opening of bolls mostly stopped, and in the far Southwest the crop was generally developing satisfactorily, under favorable conditions.

Up until that time the general tenor of their reports was unfavorable. From then on the reports, as I have been able to summarize them, indicate generally favorable weather. In other words, it seems, from looking at the Weather Bureau weekly bulletins—and I want to emphasize the word "seems"—that the damage to the cotton crop took place before September 18.

Mr. WELLS. I think much of it did.

What I have tried to say is that by October 1, farmers were apparently realizing that the continuing drought, particularly through the northern areas of the eastern belt and in Texas and Oklahoma, was resulting in greater injury than they had previously expected and that the out-turn of a large acreage of late cotton was in doubt.

But they still believed and the ginners still believed that the cotton was going to turn out all right. They realized during October that it was not turning out.

Mr. HEIMBURGER. Do your statisticians here get the weekly weather and crop bulletin from the Weather Bureau and does it affect their analysis of these farmer returns at all?

Mr. NEWELL. We get all weather information.

Mr. HEIMBURGER. I know you do.

Mr. NEWELL. We try to keep track of that. Of course, what I think is brought out here is that the farmers themselves had not realized how serious the damage was.

You know and I know that it is a common saying through the Cotton Belt, and I know it applies to tobacco, that a dry year is a good cotton year.

At that time the farmers themselves did show some realization of the damage as reflected in our October 1 report, but they had not fully appraised the extent of that damage. However, we did come down 360,000 bales.

Now then during October, as you say, that became more evident than it had in the past, plus the fact that on November 1 we had a better indication from the ginnings report, a much better indication than we had had on October 1.

That ginning report is a composite, Mr. Chairman, as you know, of the ginners' figure on the amount of cotton ginned to date and what they expect to come in later.

In that regard the ginners do take into account the total potential of the receipts that they may get in their area, and to that extent it is a composite. When the indication from the ginners' report fell much below that from the farmers' reports, it was an indication that the acreage estimate on which we had been basing the production was too high.

Now, then, we had no real basic material on which to determine how much too high it was at that time. We did not get that until the December acreage survey.

We could not just take these indications and use them to revise the estimate of acreage for harvest because we were getting our actual

acreage survey information the 1st of December. Nevertheless, the 1,000,000-bale drop at that time did reflect this factor by reason of the fact that our ginnings report had fallen below—did reflect some of the drop in acreage that was shown up in the December report.

Mr. HEIMBURGER. Of course, as I understand it, Mr. Newell, your estimates in making these forecasts are based on what you consider to be normal weather?

Mr. NEWELL. That is right.

Mr. HEIMBURGER. And when you find that the weather is not normal, then, of course, you have to readjust your estimate. And you shift your weather factor down a little, you tilt it down if the weather is poor, and you tilt it up if the weather is exceptionally good.

According to the Weather Bureau reports I have here, generally up until September 1, or shortly, thereafter, they show warnings continually of unfavorable weather for a good cotton harvest.

On September 1, could not your weather factor have been tilted down by the unfavorable factors that have occurred in the past 2 months, rather than wait until a month or 6 weeks later when you get a confirmation in from the field that weather has been what the Weather Bureau says it was?

Mr. WELLS. I will be glad to comment on that myself, because this is one of the real questions that we have done quite a bit of research work on, I think both ourselves and other people. That is, off and on over the years.

Mr. ABERNETHY. It is a real question to determine when the Weather Bureau has reported it correctly.

Mr. WELLS. And this is especially more true with wheat than it is with cotton, Mr. Heimburger.

We ourselves, and various other people have over the years tried to carry studies forward relating average weather conditions to average yields per acre. So far we have not gotten any set of relations which are stable enough between the reports of weather conditions as they come in from month to month and the final yield to justify putting them into the standard Crop Reporting Board procedure, although I will grant you that there are years when an expert, by himself, may make a better estimate than the Board by playing the weather and what he considers his hunches.

It is a question of whether you follow your indications and a standard procedure or say, something here is unusual and my personal judgment is this:

All I am saying is that we have over the years done a lot of research. This is especially true with respect to wheat. But the soil moisture, rainfall, and yield relationships are quite variable.

Do you want to supplement that, Mr. Burkhead?

Mr. BURKHEAD. You are talking about the weather. About September 18 I was in the territory that you are talking about, and those rains were of short duration. I think you will find that in the Weather Bureau record. They hit the dry section of the upper South, if you want to call it that, but the effects of that bad September weather that you talk about up until about the 18th or the middle, of course was taken into account by our crop reporters when they reported to us late in September.

Mr. HEIMBURGER. The bad weather had been there according to the Weather Bureau weekly bulletins for the previous 2 months, July and August.

Mr. BURKHEAD. Yes. I want to say here that we have no absolute weather factors, as Mr. Wells says, that we can work out, which will indicate on our charts a certain change in production. Weather conditions between, say, August 1 and September 1, whatever they may be, are reflected in the individual reports that farmers turn in the latter part of the month.

Mr. HEIMBURGER. But not in your statistical handling of the reports that are already on hand.

Mr. BURKHEAD. Will you say that again?

Mr. HEIMBURGER. You said that the bad weather during July and August will be reflected by the reports that these farmers send in.

Mr. BURKHEAD. Yes; we do not add or take off anything.

Mr. WELLS. We do not add weather factors to the interpretation.

Mr. BURKHEAD. When we go into these charts here at a later time we will bring that out in more detail.

Mr. WELLS. What I have tried to say is that we have carried forward research. We have done so with cotton, but more with wheat. And that has been with regard to temperature and rainfall and various things. You can get some relations.

Mr. ALBERT. If you added the weather factor, it would be duplicating the same factor.

Mr. BURKHEAD. The effects are already in the reports.

Mr. HEIMBURGER. Except for the time element. The weather that has occurred up to September 1 would not be apparent to you until you get the October reports.

Mr. WELLS. Our reports come in on September 1.

Mr. BURKHEAD. We get from the Weather Bureau, of course, advance copies of their weekly crop reports. That is not a pipeline. That is just an ordinary understanding, because our State statisticians in the States get some of the information which is used in those weather reports that you have just been reading. Therefore, our people know that as soon as anybody. And we would be remiss in saying that anybody who is trying to estimate the cotton crop does not take into consideration all of the facts, whether it is weather or hearsay or what not.

Those are things which we will get into later when we start through this book.

Mr. ABERNETHY. I would like to ask one question with reference to the question Mr. Albert propounded a moment ago, something about amending the law.

As I understand it, you had reference to amendment of the law to permit them to take into consideration such elements if it comes to their attention.

Mr. ALBERT. One of the things is the legal reporting date and the specific limitations which the law makes—factors that they can take into consideration.

Mr. WELLS. I would say in all fairness that I think the legislation is a secondary question, but there may be some places where you may want to look at it.

Mr. ABERNETHY. All right; you may proceed.

Mr. WELLS. A study of these tables will indicate that the market generally was anticipating a substantial increase in cotton acreage and a large cotton crop well before any acreage or cotton production forecast was issued.

Cotton futures for October delivery were down to 36.13 cents per pound on July 6, the last closing quotation prior to the issuance of the first official acreage estimate on July 9, and to 34.16 cents per pound on August 7, the day before the release of the first production forecast on August 8. These quotations compare with the seasonal low of 34.24 cents per pound shown on September 4 and 5. Spot cotton prices were still at the ceiling level in late June but they also declined during July, averaging 35.08 cents per pound on August 7, the day before the first production forecast was issued, as compared with the seasonal low of 34.10 cents which was the average for September 5.

They are attached here.

Mr. ABERNETHY. You indicate there that the market was generally anticipating a substantial, you say, cotton acreage and large cotton crop?

Mr. WELLS. Yes.

Mr. ABERNETHY. But do you not also state that they were basing that on the estimates or guesstimates that were made by the Department of Agriculture?

Mr. WELLS. No, Mr. Chairman; I think that the futures market had practically discounted the large crop before the first acreage estimate was issued.

Mr. ABERNETHY. I do not see how you could say that, because when the November 8 estimate came on the market just went up and up and up.

Mr. WELLS. What I am saying is that I do not think that either acreage or production estimates were responsible for the decline in cotton prices. Had we been able to call the turn in crop conditions earlier, prices would have gone up earlier, Mr. Chairman, in my opinion.

Mr. ABERNETHY. You are just putting it in another way. Do you not say this: That if the estimates as of September and October had been more reasonably in line with November, the market in September and October would have been more reasonably in line with the November market?

Mr. WELLS. What I am trying to say is that the decline in prices was not due to the Crop Reporting Board report, but the prices would have gone up earlier had the turn been called earlier.

I am putting the straight statistical record down so that you gentlemen can interpret it just as well as myself, you see. That is all I am trying to say. I think we are in agreement on that.

We certainly regret that the early estimates were not closer to the December estimate, but we do want to say to the committee that our statisticians and the Crop Reporting Board recognized the difficult problems with which they were faced, that we did expand our reporter lists in an effort to meet the situation, that the methods used were the same as those which had yielded excellent results over the last decade—in fact, we thought we were improving our record up to this year—and that the condition of the crop did seriously deteriorate during the growing season—a factor which we have no way of forecasting.

In this connection, the committee may be interested in a comment by Mr. W. M. Garrard, general manager of the Staple Cotton Cooperative Association, Greenwood, Miss., which appeared in the cooperative's The Staple Cotton Review for November 1951 following

the release of the November estimate which showed a decrease of 254,000 bales in indicated production in the Delta areas of Mississippi as compared with the first August forecast. The statement reads:

> We consider the Government's declining estimates from month to month have been unusually accurate. We have no fault, whatever, to find with the Government's indicated yield for the Delta. In fact, we think the Crop Reporting Board should be congratulated on its ability to observe from month to month what was happening in the way of deterioration. The November estimate (for the Delta) will probably not be far from the December estimate.
>
> Cotton ginned throughout the Belt to November 1 certainly showed that previous estimates have been too high. We think it was wise and showed courage on the part of the Crop Reporting Board to reduce drastically the November 1 estimate, and instead of being censured for such a heavy reduction, the Board should be congratulated on being factual and giving to the trade an accurate report, regardless of the censure that would inevitably come from such a large reduction from the previous estimate.

In conclusion, Mr. Chairman, let me again say that we do realize our responsibilities to farmers, as well as to others, and that we are glad this hearing has been called. We also want to see the methods and procedures used by the Crop Reporting Board strengthened and improved, and we will welcome any suggestions or recommendations. We have given considerable thought as to how we may best make our materials available to you for consideration as to the adequacy of our methods, and we do suggest that as a first step you may want to review in some detail the forms, methods, and procedures which were actually used in estimating cotton acreage and production for 1951.

That concludes our prepared statement, Mr. Chairman. Mr. Burkhead and various other members of the Service are also here and any of us will be glad to answer questions or otherwise assist the committee as you see fit.

Mr. ABERNETHY. Thank you very much, Mr. Wells, for this statement. The charts attached to your paper will be made a part of the record.

(The charts are as follows:)

United States cotton production: Comparison of forecasts and final ginnings in 500 pounds gross weight bales

Year	Aug. 1[1]		Sept. 1[1]		Oct. 1[1]		Nov. 1[1]		Dec. 1		Final ginnings
	Thousand bales	Percent of final	Thousand bales	Percent of final	Thousand bales	Percent of final	Thousand bales	Percent of final	Thousand bales	Percent of final	Thousand bales
1915	11,876	106.1	11,697	104.5	10,950	97.8			11,161	99.7	11,192
1916	12,916	112.8	11,800	103.1	11,637	101.6			11,511	100.5	11,450
1917	11,949	105.7	12,499	110.6	12,047	106.6			10,949	96.9	11,302
1918	13,619	113.1	11,137	92.5	11,818	98.1			11,700	97.2	12,041
1919	11,016	96.5	11,230	98.3	10,696	93.7			11,030	96.6	11,421
1920	12,519	93.1	12,783	95.1	12,123	90.2			12,987	96.6	13,440
1921	8,203	103.1	7,037	88.5	6,537	82.2			8,340	104.9	7,954
1922	11,447	117.3	10,575	108.3	10,135	103.8			9,964	102.1	9,762
1923	11,517	113.6	10,788	106.4	11,015	108.6	10,248	101.1	10,081	99.4	10,140
1924	12,351	90.6	12,787	93.8	12,499	91.7	12,816	94.0	13,153	96.5	13,628
1925	13,566	84.2	13,740	85.3	14,759	91.6	15,386	95.5	15,603	96.9	16,104
1926	15,621	86.9	15,166	84.4	16,627	92.5	17,918	99.7	18,618	103.6	17,977
1927	13,492	104.1	12,692	98.0	12,678	97.9	12,842	99.1	12,789	98.7	12,956
1928	14,291	98.7	14,439	99.7	13,993	96.7	14,133	97.6	14,373	99.3	14,478
1929	15,543	104.8	14,825	100.0	14,915	100.6	15,009	101.2	14,919	100.6	14,825
1930	14,362	103.1	14,340	102.9	14,486	104.0	14,438	103.6	14,243	102.2	13,932
1931	15,584	91.2	15,685	91.7	16,284	95.3	16,903	98.9	16,918	99.0	17,096
1932	11,306	87.0	11,310	87.0	11,425	87.9	11,947	91.9	12,727	97.9	13,002
1933	12,314	94.4	12,414	95.1	12,885	98.8	13,100	100.4	13,177	101.0	13,047
1934	9,195	95.4	9,252	96.0	9,443	98.0	9,634	100.0	9,731	101.0	9,637
1935	11,798	110.9	11,489	108.0	11,464	107.8	11,141	104.7	10,734	100.9	10,638
1936	12,481	100.7	11,121	89.7	11,609	93.6	12,400	100.0	12,407	100.1	12,399
1937	15,593	82.3	16,098	85.0	17,573	92.8	18,243	96.3	18,746	98.9	18,945
1938	11,988	100.4	11,825	99.0	12,212	102.2	12,137	101.6	12,008	100.5	11,944
1939	11,412	96.6	12,380	104.8	11,928	100.9	11,845	100.2	11,792	99.8	11,816
1940	11,429	91.0	12,772	101.6	12,741	101.4	12,847	102.2	12,686	101.0	12,565
1941	10,817	100.7	10,710	99.7	11,061	103.0	11,020	102.6	10,976	102.2	10,742
1942	13,085	102.1	14,028	109.4	13,818	107.8	13,329	103.9	12,982	101.3	12,820
1943	12,558	109.9	11,679	102.2	11,478	100.4	11,442	100.1	11,478	100.4	11,429
1944	11,022	90.1	11,483	93.9	11,953	97.7	12,320	100.7	12,359	101.1	12,230
1945	10,134	112.4	10,026	111.2	9,779	108.5	9,368	103.9	9,195	102.0	9,016
1946	9,290	107.5	9,171	106.1	8,724	101.0	8,487	98.2	8,482	98.2	8,640
1947	11,844	99.9	11,849	99.9	11,508	97.0	11,505	97.0	11,694	98.6	11,859
1948	15,169	102.0	15,219	102.3	15,079	101.4	15,166	101.9	14,937	100.4	14,877
1949	14,805	91.8	14,943	92.7	15,446	95.8	15,524	96.3	16,034	99.4	16,128
1950	10,308	103.0	9,882	98.7	9,869	98.6	9,945	99.3	9,884	98.7	10,012
1951	17,266		17,291		16,931		15,771		15,290		
1952											

[1] From 1915 to 1923, inclusive, report related to 25th of preceding month.

United States cotton acreage harvested—Comparison of preliminary and final estimates

Crop year	September 1			December 1			End of year—		Final
	Thousand acres	Percent of—		Thousand acres	Percent of—		Thousand acres	Percent of final [1]	
		End of year	Final [1]		End of year	Final [1]			
1910	(2)	(2)	(2)	32,129	99.2	102.0	32,403	102.8	31,508
1911	(2)	(2)	(2)	34,207	94.9	98.0	36,045	103.2	34,916
1912	(2)	(2)	(2)	33,581	98.0	103.1	34,283	105.3	32,557
1913	(2)	(2)	(2)	35,676	96.2	101.3	37,089	105.3	35,206
1914	(2)	(2)	(2)	36,722	99.7	103.1	36,832	103.4	35,615
1915	(2)	(2)	(2)	30,957	98.6	103.4	31,412	104.9	29,951
1916	(2)	(2)	(2)	35,239	100.7	106.6	34,985	105.8	33,071
1917	(2)	(2)	(2)	33,634	99.4	104.3	33,841	104.9	32,245
1918	(2)	(2)	(2)	35,890	99.7	102.4	36,008	102.8	35,038
1919	(2)	(2)	(2)	33,344	99.3	101.3	33,566	102.0	32,906
1920	(2)	(2)	(2)	36,383	101.4	105.7	35,878	104.3	34,408
1921	(2)	(2)	(2)	31,427	103.0	109.6	30,509	106.4	28,678
1922	(2)	(2)	(2)	33,742	102.1	107.6	33,306	105.3	31,361
1923	(2)	(2)	(2)	37,420	100.8	105.3	37,123	104.4	35,550
1924	(2)	(2)	(2)	40,115	97.0	101.6	41,360	104.7	39,501
1925	(2)	(2)	(2)	45,945	99.8	103.5	46,053	103.8	44,386
1926	47,207	100.3	105.8	47,653	101.2	106.8	47,087	105.6	44,608
1927	40,626	101.2	106.0	40,168	100.1	104.8	40,138	104.7	38,342
1928	44,916	99.1	105.8	45,326	100.0	106.8	45,341	106.9	42,434
1929	46,594	101.7	107.8	45,981	100.4	106.4	45,793	105.9	43,232
1930	44,791	99.3	105.5	45,218	100.3	106.5	45,091	106.2	42,444
1931	40,889	100.5	105.6	40,495	99.5	104.6	40,693	105.1	38,704
1932	36,611	101.9	102.0	37,589	104.6	104.7	35,939	100.1	35,891
1933	30,036	100.2	102.2	30,144	100.6	102.6	29,978	102.0	29,383
1934	27,241	100.9	101.4	27,515	102.0	102.4	26,987	100.5	26,866
1935	28,652	104.8	104.2	27,331	100.0	99.4	27,335	99.4	27,509
1936	29,720	99.0	99.9	30,054	100.1	101.0	30,028	100.9	29,755
1937	33,736	99.2	100.3	33,930	99.8	100.9	34,001	101.1	33,623
1938	26,449	109.1	109.1	25,346	104.5	104.5	24,248	100.0	24,248
1939	24,222	101.8	101.8	23,928	100.5	100.5	23,805	100.0	23,805
1940	24,406	102.3	102.3	24,078	100.9	100.9	23,861	100.0	23,861
1941	22,633	101.8	101.8	22,376	100.6	100.6	22,238	100.0	22,236
1942	23,273	103.0	103.0	22,660	100.3	100.3	22,602	100.0	22,602
1943	21,672	100.1	100.3	21,874	101.0	101.2	21,652	100.2	21,610
1944	20,164	100.8	102.8	20,098	100.4	102.5	20,009	102.0	19,617
1945	18,008	104.4	105.7	17,688	102.6	103.9	17,241	101.2	17,029
1946	17,776	100.9	101.1	17,639	100.1	100.3	17,615	100.2	17,584
1947	21,143	99.4	99.1	21,148	99.4	99.1	21,269	99.7	21,330
1948	23,323	102.4	101.8	23,003	101.0	100.4	22,768	99.4	22,911
1949	25,907	95.1	94.4	26,898	98.8	98.0	27,230	99.2	27,439
1950	18,429	103.4	103.3	17,850	100.1	100.0	17,828	99.9	17,843
1951	28,544			26,698					

[1] For years prior to 1932 the prleminary estimates for September, December, and end of year are high in relation to the final estimates because of a downward revision in the acreage series which was released in May 1933.

[2] Not available.

United States, all corn production: Comparison of forecasts and final estimates, 1919–51

Year	July 1		Aug. 1		Sept. 1		Oct. 1		Nov. 1		December		Final estimate, thousands of bushels
	Thousands of bushels	Percent of final	Thousands of bushels	Percent of final	Thousands of bushels	Percent of final	Thousands of bushels	Percent of final	Thousands of bushels	Percent of final	Thousands of bushels	Percent of final	
1919	2, 815, 430	105. 1	2, 788, 378	104. 1	2, 857, 692	106. 7	2, 900, 511	108. 3	2, 910, 250	108. 7	2, 917, 450	108. 9	2, 678, 541
1920	2, 778, 903	90. 5	3, 003, 322	97. 8	3, 131, 349	102. 0	3, 216, 192	104. 7	3, 199, 126	104. 2	3, 232, 367	105. 3	3, 070, 604
1921	3, 123, 139	106. 6	3, 032, 170	103. 5	3, 185, 876	108. 8	3, 163, 063	108. 0	3, 151, 698	107. 6	3, 080, 372	105. 2	2, 928, 442
1922	2, 860, 245	105. 6	3, 016, 950	111. 4	2, 874, 759	106. 2	2, 853, 399	105. 4	2, 896, 108	107. 0	2, 890, 712	106. 8	2, 707, 306
1923	2, 877, 437	100. 1	2, 981, 752	103. 7	3, 075, 786	107. 0	3, 021, 454	105. 1	3, 029, 192	105. 4	3, 054, 395	106. 2	2, 875, 292
1924	2, 515, 385	113. 1	2, 576, 440	115. 9	2, 512, 888	113. 0	2, 458, 809	110. 6	2, 477, 538	111. 4	2, 436, 513	109. 6	2, 223, 123
1925	3, 095, 176	110. 6	2, 950, 340	105. 4	2, 885, 108	103. 1	2, 917, 836	104. 3	3, 013, 390	107. 7	2, 900, 581	103. 7	2, 798, 367
1926	2, 660, 780	104. 5	2, 576, 936	101. 2	2, 697, 872	105. 9	2, 679, 988	105. 2	2, 693, 963	105. 8	2, 645, 031	103. 9	2, 546, 972
1927	2, 274, 424	86. 9	2, 385, 226	91. 2	2, 456, 561	93. 9	2, 603, 437	99. 5	2, 753, 249	105. 2	2, 786, 288	106. 5	2, 616, 120
1928	2, 735, 617	102. 6	3, 029, 561	113. 7	2, 930, 586	109. 9	2, 903, 272	108. 9	2, 895, 449	108. 6	2, 839, 959	106. 5	2, 665, 516
1929	2, 662, 050	105. 8	2, 740, 514	108. 9	2, 455, 997	97. 6	2, 528, 077	100. 5	2, 621, 451	104. 2	2, 622, 189	104. 2	2, 515, 937
1930	2, 802, 442	134. 7	2. 211, 823	106. 3	1, 982, 765	95. 3	2, 046, 716	98. 4	2, 094, 481	100. 7	2, 081, 048	100. 0	2, 080, 130
1931	2, 967, 953	115. 2	2, 775, 301	107. 7	2, 715, 357	105. 4	2, 702, 752	104. 9	2, 674, 369	103. 8	2, 556, 863	99. 3	2, 575, 927
1932	2, 995, 850	102. 2	2, 819, 794	96. 2	2, 854, 307	97. 4	2, 884, 682	98. 4	2, 920, 689	99. 7	2, 908, 045	99. 2	2, 930, 352
1933	2, 384, 032	99. 4	2, 273, 019	94. 8	2, 284, 799	95. 3	2, 291, 398	95. 6	2, 289, 544	95. 5	2, 330, 237	97. 2	2, 397, 593
1934	2, 113, 137	145. 8	1, 607, 108	110. 9	1, 484, 602	102. 5	1, 4.6, 772	97. 8	1, 371, 527	94. 7	1, 380, 718	95. 3	1, 448, 920
1935	2, 044, 601	88. 9	2, 272, 147	98. 8	2, 183, 755	95. 0	2, 213, 319	96. 3	2, 211, 268	96. 2	2, 202, 852	95. 8	2, 299, 363
1936	2, 244, 834	149. 1	1, 439, 135	95. 6	1, 458, 295	96. 9	1, 509, 362	100. 2	1, 526, 627	101. 4	1, 524, 317	101. 2	1, 505, 689
1937	2, 571, 851	97. 3	2, 658. 748	100. 6	2, 549, 281	96. 5	2, 561, 936	96. 9	2, 651, 393	100. 3	2, 644, 995	100. 1	2, 642, 978
1938	2, 482, 102	97. 4	2, 566, 221	100. 7	2, 454, 526	96. 3	2, 459, 316	96. 5	2, 480, 958	97. 3	2, 542, 238	99. 7	2, 548, 753
1939	2, 570, 795	99. 6	2, 459, 888	95. 3	2, 523. 092	97. 8	2, 532, 417	98. 1	2, 591, 063	100. 4	2, 619, 137	101. 5	2, 580, 985
1940	2, 415, 998	98. 3	2, 248, 246	91. 5	2, 297, 186	93. 5	2, 352, 185	95. 7	2, 433, 523	99. 0	2, 449, 200	99. 7	2, 457, 146
1941	2, 548, 709	96. 1	2, 587, 574	97. 6	2, 523, 964	95. 2	2, 625, 502	99. 0	2, 675, 373	100. 9	2, 672, 541	100. 8	2, 651, 889
1942	2, 627, 823	85. 6	2, 753, 696	89. 7	3, 015, 915	98. 3	3, 132, 002	102. 1	3, 185, 141	103. 8	3, 175, 154	103. 5	3, 068, 562
1943	2, 706, 552	91. 3	2, 874, 711	96. 9	2, 985, 267	100. 7	3, 055, 605	103. 0	3, 085, 652	104. 0	3, 076, 159	103. 7	2, 965, 980
1944	2, 980, 136	96. 5	2, 929, 117	94. 9	3, 101, 319	100. 4	3, 196, 977	103. 5	3, 258, 378	105. 5	3, 228, 361	104. 5	3, 088, 110
1945	2, 685, 328	93. 2	2, 844, 478	98. 7	3, 069, 055	106. 5	3, 078, 126	106. 8	3, 073, 966	106. 7	3, 018. 410	104. 8	2, 880, 933
1946	3, 341, 646	102. 8	3, 496, 820	107. 6	3, 371, 707	103. 7	3, 374, 428	103. 8	3, 380, 672	104. 0	3, 287, 927	101. 2	3, 249, 950
1947	2, 612, 809	109. 6	2, 659, 949	111. 6	2, 403, 913	100. 8	2, 458, 674	103. 1	2, 447, 422	102. 7	2, 400, 952	100. 7	2, 383, 970
1948	3, 328, 862	90. 4	3, 506, 363	95. 2	3, 528, 815	95. 8	3, 567, 955	96. 9	3, 649, 510	99. 1	3, 650, 548	99. 2	3, 681, 793
1949	3, 530, 185	104. 5	3, 538, 257	104. 7	3, 525, 741	104. 3	3, 476, 986	102. 9	3, 357, 618	99. 4	3, 377, 790	100. 0	3, 379, 436
1950	3, 175, 602	103. 9	3, 167, 607	103. 6	3, 162, 638	103. 4	3, 117, 967	102. 0	3, 105, 436	101. 6	3, 131, 009	102. 4	3, 057, 803
1951	3, 295, 143	[1] 112. 0	3, 206, 992	[1] 109. 0	3, 130, 775	[1] 106. 4	3, 104, 988	[1] 105. 6	3, 088, 092	[1] 105. 0	2, 941, 423	[1] 100. 0	----------

[1] Percent of December.

All wheat: United States production, comparison of forecasts and final estimates, 1919–51

Year	June 1		July 1		Aug. 1		Sept. 1		Oct. 1		December		Final estimate, thousands of bushels
	Thousands of bushels	Percent of final	Thousands of bushels	Percent of final	Thousands of bushels	Percent of final	Thousands of bushels	Percent of final	Thousands of bushels	Percent of final	Thousands of bushels	Percent of final	
1919			1,160,678	121.9	940,381	98.8	923,350	97.0	918,471	96.5	940,987	98.8	952,097
1920			737,600	87.5	794,147	94.2	770,015	91.3	750,648	89.0	787,128	93.3	843,277
1921			809,412	98.8	756,825	92.4	753,858	92.1	740,655	90.4	794,893	97.1	818,964
1922			816,936	96.5	805,201	95.1	818,474	96.7	810,123	95.7	856,211	101.1	846,649
1923			820,628	108.1	793,376	104.5	789,227	103.9	781,737	102.9	785,741	103.5	759,482
1924			740,012	87.9	814,117	96.7	836,754	99.4	855,806	101.7	872,673	103.7	841,617
1925			679,590	101.6	678,446	101.5	699,569	104.6	697,272	104.3	668,365	100.1	668,700
1926			767,357	92.2	839,201	100.8	838,591	100.8	839,818	100.9	832,305	100.0	832,213
1927			853,634	97.6	851,145	97.3	900,892	98.4	866,538	99.0	871,691	99.6	875,059
1928			799,937	87.5	890,977	97.4	901,072	98.5	903,865	98.9	902,749	98.7	914,373
1929			833,869	101.2	773,885	93.9	785,726	95.3	791,768	96.1	806,508	97.9	824,183
1930			807,265	91.1	820,613	92.6	837,761	94.5	839,612	94.7	850,965	96.0	886,522
1931			869,013	92.3	893,582	94.9	885,643	94.1	884,286	93.9	892,271	94.8	941,540
1932			736,971	97.4	722,687	95.6	714,538	94.5	711,707	94.1	726,831	96.1	756,307
1933			495,681	89.8	499,671	90.5	506,557	91.7	514,816	93.2	527,413	95.5	552,215
1934			483,662	91.9	490,960	93.3	493,285	93.8	496,982	94.5	496,469	94.4	526,052
1935			731,045	116.4	607,678	96.7	594,615	94.6	598,935	95.3	603,199	96.0	628,227
1936			638,399	101.4	632,745	100.5	630,241	100.1	627,233	99.6	626,461	99.5	629,880
1937			882,287	101.0	890,419	101.9	885,950	101.4	886,895	101.5	873,993	100.0	873,914
1938			967,412	105.2	955,989	103.9	939,972	102.2	940,229	102.2	930,801	101.2	919,913
1939			716,655	96.7	731,432	98.7	736,115	99.3	739,445	99.8	754,971	[3]101.9	741,210
1940			728,644	89.4	760,623	93.4	783,560	96.2	792,332	97.3	816,698	100.3	814,646
1941	910,699	96.7	923,613	98.1	950,953	101.0	957,563	101.7	961,194	102.0	945,937	100.4	941,970
1942	868,059	89.5	904,288	93.3	955,172	98.5	981,793	101.3	984,046	101.5	981,327	101.2	969,381
1943	730,525	86.6	790,823	93.7	834,894	98.9	834,957	99.0	835,816	99.1	836,298	99.1	843,813
1944	1,034,785	97.6	1,127,822	106.4	1,132,105	106.8	1,115,402	105.2	1,108,881	104.6	1,078,647	101.7	1,060,111
1945	1,084,652	97.9	1,128,690	101.8	1,146,283	103.4	1,152,270	104.0	1,149,825	103.8	1,123,143	101.3	1,108,224
1946	1,025,509	88.9	1,090,092	94.5	1,160,366	100.6	1,167,319	101.2	1,169,422	101.4	1,155,715	100.2	1,153,046
1947	1,409,893	103.1	1,435,551	105.0	1,427,747	104.4	1,408,602	103.0	1,406,761	102.9	1,364,919	99.8	1,367,186
1948	1,192,425	90.8	1,241,751	94.5	1,284,323	97.8	1,284,995	97.8	1,283,770	97.7	1,288,406	98.1	1,313,534
1949	1,336,976	117.2	1,188,690	104.2	1,131,830	99.2	1,129,081	98.9	1,126,226	98.7	1,146,463	100.5	1,141,188
1950	944,514	92.7	956,586	93.8	996,490	97.8	1,011,644	99.2	1,010,069	99.1	1,026,755	100.7	1,019,389
1951	1,053,825	[2]106.7	1,070,132	[2]108.4	998,286	[2]101.1	999,149	[2]101.2	993,598	[2]100.6	987,474	[2]100.0	

[1] Sum of spring wheat forecast plus Aug. 1 winter wheat estimate.
[2] Percent of December.

Cotton: Closing prices (in cents), futures contracts, New York Cotton Exchange, April through December 1951

Day of month	October delivery						December delivery		March delivery, December
	April	May	June	July	August	September	October	November	
1	[1]	39.55	38.28	[1]	34.31	[2]	37.08	38.52	42.28
2	40.56	39.45	[2]	36.40	34.40	[1]	36.94	39.20	[1]
3	40.12	39.52	[1]	36.32	34.27	[3]	36.87	39.33	43.39
4	39.32	39.39	37.71	[3]	[2]	34.24	36.65	[1]	43.15
5	39.52	[3]	37.58	35.94	[1]	34.24	36.75	39.34	43.16
6	39.65	[1]	37.84	36.13	34.29	34.38	36.52	[2]	43.28
7	39.45	39.30	37.59	[2]	34.36	34.49	[1]	39.83	43.38
8	[1]	[4] 39.41	37.42	[1]	[4] 34.34	34.42	[4] 37.12	[4] 41.73	43.58
9	39.72	39.43	[2]	[4] 35.65	34.58	[1]	37.10	43.73	[1]
10	39.53	39.45	[1]	35.36	34.73	[4] 34.40	36.94	41.80	[4] 43.09
11	39.52	39.49	37.28	34.98	[2]	34.46	36.75	[1]	42.24
12	39.58	[2]	37.41	35.25	[1]	34.56	[3]	[2]	42.46
13	39.70	[1]	37.51	35.33	34.58	34.60	36.64	43.12	42.27
14	39.72	39.58	37.35	[2]	34.36	34.78	[1]	42.65	41.73
15	[1]	39.59	37.40	[1]	34.39	34.89	36.87	42.40	41.90
16	39.87	39.39	[2]	34.92	34.48	[1]	37.22	42.10	[1]
17	39.75	39.52	[1]	34.74	34.62	35.15	36.85	41.53	41.82
18	39.77	39.48	37.44	34.77	[2]	35.00	37.01	[1]	41.48
19	39.73	[2]	37.32	34.87	[1]	35.00	36.85	41.68	42.00
20	39.80	[1]	37.23	34.82	34.62	35.23	36.92	43.00	42.41
21	39.76	39.36	37.06	[2]	34.66	35.54	[1]	42.35	42.05
22	[1]	39.01	36.96	[1]	34.90	36.28	37.01	[2]	42.08
23	39.77	38.50	[2]	34.80	34.90	[1]	37.10	42.62	[1]
24	39.89	38.12	[1]	34.86	34.83	36.40	37.14	42.57	[3]
25	39.96	38.02	36.58	34.89	[2]	36.58	37.32	[1]	[3]
26	39.93	[2]	36.54	34.90	[1]	37.58	37.77	42.95	42.30
27	40.33	[1]	36.49	34.95	34.67	37.36	37.68	43.19	42.48
28	40.16	37.63	36.02	[2]	34.50	36.70	[1]	43.08	42.11
29	[1]	37.89	36.06	[1]	34.49	36.78	38.18	43.25	42.00
30	39.93	[3]	[2]	34.90	34.49	[1]	38.64	43.79	[1]
31	------	38.08	------	34.75	34.39	------	38.47	------	41.90
Average	39.80	39.05	37.19	35.21	34.53	35.35	37.17	41.90	42.44

[1] Sunday.
[2] Closed.
[3] Holiday.
[4] Day of cotton report.

Source: Cotton Branch, PMA.

Cotton: Average prices (in cents) for Middling 15/16-inch at the 10 spot markets, April through December, 1951

Day of month	April	May	June	July	August	September	October	November	December
1	(1)	45.25	45.20	(1)	35.68	(2)	36.89	38.26	43.04
2	45.14	45.25	(2)	45.20	35.54	(1)	36.73	38.94	(1)
3	45.14	45.25	(1)	44.95	35.20	(3)	36.64	39.08	43.04
4	45.14	45.25	45.18	(3)	(2)	34.13	36.44	(1)	42.94
5	45.14	(2)	45.18	44.64	(1)	34.10	36.53	49.08	42.91
6	45.14	(1)	45.21	44.37	35.15	34.24	36.31	(2)	43.05
7	45.14	45.25	45.18	(2)	35.08	34.32	(1)	39.57	43.35
8	(1)	4 45.25	45.14	(1)	4 34.94	34.24	4 36.87	4 41.45	43.35
9	45.14	45.25	(2)	4 43.69	35.18	(1)	36.87	43.43	(1)
10	45.14	45.23	(1)	42.89	35.25	4 34.22	36.71	41.59	4 42.85
11	45.14	45.22	45.10	41.85	(2)	34.28	36.51	(1)	41.99
12	45.14	(2)	45.25	41.29	(1)	34.33	(3)	(2)	42.20
13	45.14	(1)	45.25	40.82	35.08	34.38	36.42	42.69	41.99
14	45.14	45.22	45.25	(2)	34.81	34.56	(1)	42.40	41.49
15	(1)	45.22	45.25	(1)	34.79	34.67	36.62	42.11	41.63
16	45.14	45.23	(2)	39.07	34.87	(1)	37.00	41.67	(1)
17	45.14	45.23	(1)	38.35	34.90	34.92	36.64	41.10	41.54
18	45.14	45.24	45.25	38.23	(2)	34.79	36.79	(1)	41.22
19	45.14	(2)	45.25	38.13	(1)	34.76	36.63	41.18	41.73
20	45.14	(1)	45.25	37.98	34.91	34.95	36.70	42.47	42.14
21	45.14	45.23	45.25	(2)	34.90	35.29	(1)	41.82	41.78
22	(1)	45.23	45.25	(1)	35.12	35.91	36.79	(2)	41.82
23	45.14	45.24	(2)	37.93	35.12	(1)	36.86	42.02	(1)
24	45.25	45.22	(1)	37.77	35.05	35.96	36.91	42.02	(3)
25	45.25	45.22	45.25	37.53	(2)	36.19	37.08	(1)	(3)
26	45.25	(2)	45.25	37.18	(1)	37.08	37.53	42.33	42.02
27	45.25	(1)	45.25	36.82	34.84	37.06	37.46	42.44	42.22
28	45.25	45.19	45.25	(2)	34.57	36.32	(1)	42.33	41.84
29	(1)	45.19	45.25	(1)	34.47	36.31	37.95	42.49	41.74
30	45.25	(2)	(2)	36.58	34.43	(1)	38.41	43.16	(1)
31		45.20		36.21	34.32		38.20		41.65
Average	45.17	45.23	45.22	40.07	34.97	35.09	36.94	41.46	42.23
High	45.25	45.25	45.25	45.20	35.68	37.08	38.41	43.43	43.35
Low	45.14	45.19	45.10	36.21	34.32	34.10	36.31	38.26	41.22

[1] Sunday. [2] Closed. [3] Holiday. [4] Day of cotton report.

Source: Cotton Branch, PMA.

Mr. ABERNETHY. I would like to ask the members of the committee if they have any questions they want to propound at this time. Mr. Simpson.

Mr. SIMPSON. Mr. Wells, how long has the Department been estimating cotton acreage and yields—how many years?

Mr. NEWELL. Since 1915.

Mr. SIMPSON. Since 1915?

Mr. NEWELL. Yes.

Mr. WELLS. You mean on this monthly basis, such as this?

We have been estimating back to somewhere around 1860, but the present system of reports has been pretty much standardized since 1915.

Mr. SIMPSON. Since 1915, you say?

Mr. NEWELL. On the monthly basis, yes, sir. As Mr. Wells said, our reports go back to around 1866 or thereabouts.

Mr. SIMPSON. How many years would you say that you have been making the comparison which we are trying to listen to now?

Mr. NEWELL. Since 1915.

Mr. SIMPSON. Since 1915?

Mr. NEWELL. Yes, sir.

Mr. SIMPSON. Over 35 years?

Mr. NEWELL. Yes, sir.

Mr. SIMPSON. How does your shortage compare on your estimates this year or your overage, whichever it is, on a 35-year average?

Mr. BURKHEAD. It is in your book there.

Mr. SIMPSON. In other words, over 35 years how much have you been over or under on your estimates as compared with this year?

Mr. BURKHEAD. Roughly, about 8 percent is the August average.

Mr. SIMPSON. How much?

Mr. WELLS. The difference between August and December has averaged somewhere in the neighborhood of 8 percent.

Mr. BURKHEAD. It figures out 7.32 percent from 1915 to 1950.

Mr. SIMPSON. What is the percentage that it is of this year?

Mr. NEWELL. Thirteen.

Mr. BURKHEAD. Around 13 percent, sir.

Mr. SIMPSON. Then the estimate this year is practically double that of the 35-year average; is that right?

Mr. NEWELL. That is right.

Mr. SIMPSON. That is all.

Mr. THOMPSON. I would like to ask one question.

When will you have the final ginnings out?

Mr. NEWELL. In May.

Mr. ABERNETHY. It has been pointed out here by information brought out by Mr. Simpson that the estimate for 1951 is very, very bad as compared with the average, and over the historical period of making reports which, I believe, was since 1915.

Mr. WELLS. Yes.

Mr. ABERNETHY. Does that indicate to you that we are not using as good methods as we used to use or that we are not doing as good a job, or what does that indicate to you?

Mr. WELLS. Mr. Chairman, I would say this, I think we are using as good, in fact better methods than we used to use.

Mr. ABERNETHY. You say you are using better methods than you used to use.

Did those methods go into effect in 1951 which resulted in doubling the error or did they go into effect before that time?

Mr. WELLS. We used this year substantially the same methods and procedures that we have used for the last 10 years, except recognizing the difficulty of measuring the very large change in acreage which we thought was in prospect, we did expand our reporter list by 100,000. We went out and tried to improve our methods this year, Mr. Chairman.

Mr. ABERNETHY. Throughout the entire history of the reporting service there has never been a reduction which anything like equaled that for the month of November, has there?

Mr. WELLS. I think there has, sir; I think there has.

Mr. ABERNETHY. With all of the experiences that we have had since 1915, November stands out just like a sore thumb.

Mr. WELLS. I think there have been two or three instances in the past where there have been equal changes between the October and November crop report, percentagewise; in other words, in the neighborhood of 1,000,000 bales.

Mr. ABERNETHY. I think you will find from an examination of reports made in November and previous years there has never been anything to equal that reduction.

Mr. NEWELL. Mr. Chairman, on a percentage basis, 1945 was a year like that.

Mr. ABERNETHY. I am not speaking of over-all reporting season—I am speaking of a single month, a difference that was found within 30 days.

Mr. WELLS. The first table which is attached to this statement is a record of what we have to stand on, of course.

Mr. ABERNETHY. I am just trying to point up for emphasis to lead to something else.

The November report, after 36 years of experience stands out like a sore thumb. Since that is true, and since it did have a marked effect on the cotton market, and since it did create disturbances among the farmers and the cotton trade, would you not agree with us that something ought to be done to avert a repetition of such in the future?

Mr. WELLS. I hope that something can be done, Mr. Chairman. And I hope that you will ask people completely outside of the service for suggestions as to how we can do it. We will be glad, also, to discuss with you how we can do it.

Mr. ABERNETHY. Let me ask this question: Has the Department given some consideration as to methods of avoiding a repetition of such as we experienced in November?

Mr. WELLS. We have given considerable thought to it, Mr. Chairman. We will be very glad to discuss with you various suggestions which we have or which have come to our attention.

There have been in the past substantial and sharp changes late in the season. This weather factor is one that I do not know of any way of handling. And an average error for 35 years means that you have been above and below that. And I have no method which I can recommend to you which I think will improve this thing overnight.

Mr. ABERNETHY. I am not criticizing you because you cannot find anything, but I want the cotton trade and the producers to know whether or not, in the judgment of the experts in the Department of Agriculture, this thing can be improved. If you do not think so, I think we ought to put it on the record. I think they ought to be informed. I think they ought to expect, come the 1952 report, that this same thing may happen again, and I think that ought to be put on the record now.

Mr. WELLS. I think it can be improved, but I would have to say to you, honestly and frankly from what I know of the techniques, from what the statisticians have told me, that these estimates, if they are timely, if they are made in advance as they are made, are always subject to a probable error and the chances of a rather sizable error, I think will continue under any method that may be worked out. That is as honest as I can say it.

Mr. ABERNETHY. That is a frank answer. I think that is what we are entitled to know. Therefore, I go back to a word I used in my statement when we opened this hearing this morning: These estimates then must be accepted by the trade and the producers as guesstimates, is that right?

Mr. BURKHEAD. No, sir.

Mr. ABERNETHY. What will we call them then?

Mr. WELLS. Mr. Burkhead will tell you that they should be accepted as statistical estimates. And one of our real problems is

how to get the trade and the farmers to realize that there is an error attached to them.

One of the difficulties, Mr. Chairman, at the present time—you see, I am saying it is chiefly a difference in words only between you and Mr. Burkhead—one of the difficulties for the last several years is that these estimates have been unusually accurate. The reports have been actually considerably more accurate than previously. I think we have forgotten that there are errors attached to them.

Mr. ALBERT. What is the margin of error during the past 10 years?

Mr. WELLS. Around five and one-half percent, excluding 1951, as compared with the 35-year average of over 7 percent. As I say, we actually thought we were improving.

Mr. ABERNETHY. Here is the thing I am thinking about: it has already been proven that when we have over 16,000,000 bales of cotton that the price is going to be pretty low, or when it is 16,000,000 bales it will be pretty low. That is a proven fact.

The reports which were made in October and November have proven conclusively that the estimates made by the Department or by any others who made estimates whom the trade regards as reliable that the estimates will have a marked effect on the market.

At the same time when an estimate comes out to the effect that we will have 16 or 16¼ or 16½ or 17 million bales of cotton, the price could fluctuate as much as 7 cents a pound above, that it would be as much as 7 cents, maybe 8 cents, than if the crop was only around 15 or 15½ million bales; in other words, an increase in the production of the crop from 15 or 15¼ million bales to 16 and 16¼ million bales would cause a very marked reduction in the market, and that would not be offset by the increased amount of cotton that would be produced. Therefore, I think it would be very foolish and I think it would be extremely foolish for the farmers of this country to produce 16 million bales of cotton in 1952.

It has been proven that, based on the estimates made by the Department of Agriculture, 16 million bales will bring cheap cotton. That is settled. There is no doubt about it. It has been proven conclusively by your own estimates made this year.

You have stated, and you have been very frank and very fair about it, and I want to commend you for it, as desirous as you are, or the Department is, to improve their methods of making the estimate, they have not so far been able to find any methods of so doing. I do not say that in criticism.

Mr. WELLS. I think we can improve the methods. But we are not going to get rid of a certain amount of statistical error.

Mr. ABERNETHY. You used to use a metering system. Did they use it last year?

Mr. WELLS. We used it before; very little last year.

Mr. BURKHEAD. Practically none. There was not enough for the Board to consider the information.

Mr. ABERNETHY. Did you use the metering system?

Mr. BURKHEAD. Practically none, Mr. Chairman. It was on an incidental basis because of reduction in travel, and so forth. The Board has not considered it for several years, primarily, since about 1941 or 1942, when, of course, all travel was sharply cut down, and therefore the Board has had no crop-metering information upon which to base its acreage estimates as it has had in the past.

Mr. ABERNETHY. All right. What is your opinion about the metering system?

Mr. BURKHEAD. The metering system, so far, has proven its value, especially in concentrated areas like in parts of your own State.

Mr. ABERNETHY. Then you might improve the situation by using the metering system in 1952, is that a fair statement?

Mr. BURKHEAD. I would say so.

Mr. ALBERT. That is more true when you do not have allotments, than when you do, is that not true?

Mr. WELLS. Certainly, the introduction of specific measurements in the 1930's standardized and trued up our over-all acreage estimates very materially. Whether they made more accurate the percentage changes from year to year, I do not know. But as I understand it, Mr. Chairman, back in 1941 and 1942 the amount of travel by the State statisticians was materially reduced and that cut down both field inspection by the statisticians and the use of crop meters.

We think that more field travel by the State statisticians, both in terms of actually inspecting the fields—one of the problems this year was the fact that the bolls just did not pick out—as well as crop meters would improve our estimates, although I would have to say this to you, that I think it would have to be continued over several years to get the maximum value out of it. You have to have statistics continued over several years to get the maximum value.

Mr. BURKHEAD. Yes.

Mr. WELLS. The meter readings must be compared with meter readings from the same route for the preceding year.

Mr. BURKHEAD. Yes. And if your route is altered, why then you would have a change in your information, although you could take parts of routes which are comparable, of course, and still use that part of the information.

Mr. WELLS. Do I make myself clear? There is no way that I know of, of doing this overnight. If we are going to do it seriously, we need to sit down and look at it and decide what we are to do next year and the year after and the year after, because to do something next year and not the following year, will not measure the changes in which you are interested.

Mr. SIMPSON. I assume this is a cotton hearing. I do want to inject corn into it just for a minute.

You state that for cotton you missed it 14 percent. How does that compare with the corn estimates over the period of years?

Mr. WELLS. I have attached a table on the corn. I do not have the figures in my mind. I will be glad to get them.

Mr. SIMPSON. Will you get them for us?

Mr. WELLS. I will get them and call you.

Mr. SIMPSON. I would be glad to have the 35-year average on corn and how far your estimate was accurate last year.

Mr. WELLS. I will be glad to say to you that the comment which I get on corn, the criticisms of the estimates, are more to the effect that we do not estimate the percentage of soft corn or that which is hard merchantable corn.

Mr. SIMPSON. Was there any criticism of the corn estimate last year?

Mr. WELLS. I have received considerable comment personally to the effect that they – farmers and dealers—wish we would specify the

proportion of the corn crop that is soft. You know what I am talking about.

Mr. SIMPSON. All I can say is that I am from Illinois, and our office has not received any criticism of your corn estimates.

Mr. WELLS. I have not received any great criticism of the corn total. The statements which come to me is that they wish there was some way of proportioning that which is soft and that is which hard merchantable quality. We will supply you with the figure you requested.

Mr. BURKHEAD. There is a rough statement in the table in the back of the book, right in the back of your book.

Mr. SIMPSON. This is the first time I have seen it. I would rather have your statement.

Mr. BURKHEAD. We feel like we missed the corn crop 3 or 4 percent in July which, of course, takes into account that a lot happened after that.

Mr. SIMPSON. You gave a 7-percent figure on cotton, on an average for 35 years, and 14 percent for 1951. Would you give me the same comparative figures for corn?

Mr. BURKHEAD. This year our July forecast was 12 percent off the production we estimated in December.

Mr. SIMPSON. Your final figure on corn?

Mr. BURKHEAD. Yes.

Mr. WELLS. Twelve percent, practically the same as cotton.

Mr. SIMPSON. What is your average?

Mr. BURKHEAD. We will have to figure it up. We have it here, but it is not calculated.

Mr. WELLS. We think it is lower than cotton.

Mr. SIMPSON. It was 12 percent on corn as compared to 14 percent on cotton?

Mr. NEWELL. It was 13 percent in 1951 on cotton.

Mr. SIMPSON. In 1950?

Mr. NEWELL. In 1951.

Mr. SIMPSON. And 12 percent on corn?

Mr. WELLS. Yes, sir.

Mr. NEWELL. That is right.

Mr. SIMPSON. Can I get the average over the 35 years?

Mr. WELLS. We will have someone call your office as soon as we get back and run it up on the machine.

Mr. SIMPSON. Thank you.

Mr. ABERNETHY. Going back to the subject of improving these methods, I would like to read, without putting into the record the gentleman's name—I will show you the letter after the hearing—a letter that I received.

No. 1, he said—

> I do not think that they have enough voluntary reports. I think they need more field men to check these various crops and counsel with their reporters. I think these field men should be equipped with crop meters which would be of some help to them.

That is on the point we made just a moment ago.

No. 2—

> I do not believe they are using the reports of the Production Credit Association. Farmers are required to report to the Production Credit Association the

amount of crop they propose to plant, and if the Production Credit Association is on its toes, they are supposed to find out how much they have planted. There are, certainly, some inaccuracies in these reports, but they should be of help.

What is your opinion on that?

Mr. NEWELL. If I might answer that, we have used that to some extent, but not to the extent that perhaps we should.

One comment on that might be that the production credit records may be a bit selective, but I think it is a thing worth looking into. I would not disagree with it. I think it is something we should look into further.

Mr. WELLS. In my statement, we say that one of our toughest problems is maintaining our reporter list; in other words, these reporters who report from month to month and year to year, because those are the people whom we can compare between years and months. That is one of our most difficult problems.

The production credit material would have to be looked at rather carefully to see that the same farmers are getting loans, reporting this year and last year, which would require some time and some work, I assure you.

Mr. ABERNETHY. All right.

No. 3—

The Cotton Branch of the Department of Agriculture has traveling all of the time its county agents, PMA administrative assistants, and so forth. I think each of these should be required to make estimates to the Board of Crop Estimates. They contact farmers, and while they do not have individual farms, in most cases their view would be helpful to some extent and would simply be additional information.

What is your comment on that?

Mr. NEWELL. Our men in the field are pretty closely in touch with most of those fellows.

Mr. ABERNETHY. But do these men, themselves, make any reports?

Mr. NEWELL. No, sir.

Mr. ABERNETHY. In other words, you have agricultural agents, three, four, and five in every county throughout the belt and they are supposed to be agricultural experts. and I am sure they are—all of them are generally graduates of agricultural colleges—they have had experience on the farm, they continue their interest in farm life, they work daily with farmers, farmers are in and out of their offices at all times, and that is particularly true of the PMA people. And it certainly appears to me that there is a splendid suggestion where some very fine information could be secured, not merely on a voluntary basis, but insist upon it as a part of their duty that they make reports.

I do not know how you want them made. They might be made to the State office, and the State office could balance them off and send them in to you. I realize you do not have the opportunity and the time to consider each one individually as they would come from the many counties throughout the belt, but I think that is the best suggestion that has been made. And I just wonder if it meets with the same satisfaction in your mind that it does in my mind.

Mr. ALBERT. I thought the PMA system was used right down to the community committees.

Mr. WELLS. May I say that personally I have very strong reservations on either using county agents or PMA committeemen as regular crop reporters.

Where PMA has measurements, we do use them.

Where PMA and the county agents are willing to work with us we utilize them, but one of the problems we have is to try to maintain a completely unbiased set of reports.

I think if we use the PMA committeemen who are currently engaged in a production goals program, Mr. Chairman, and if they reported to us perfectly honestly, which I think they would do, there would still be in the trade and in a great many other places a question as to the source of our information. So I have reservations which I would like to explore with you on the use of those people as regular or required reporters.

Where they have measurements we use that, and they help us to build up our reporter lists.

The county agent has other functions. I would not suggest that we add to the county agent a crop-reporting function, although I do think there are many counties where they are extremely helpful to us in building up crop-reporter lists. And there might be some way of channeling the comments from these particular people into our State offices, but I am really saying that the heart of our system is the individual farmer as a crop reporter who reports as a farmer not necessarily affiliated with any other organization.

I do want to keep those things separate. I would like to see you explore that at length, and we will be quite willing to explore it.

Mr. ABERNETHY. I do not know what your objections are, but it just occurs to me that you would get some very fine and unbiased reports from these. These people are working for the Government. That is, the PMA people and the county agents and the others.

Mr. WELLS. Yes.

Mr. ABERNETHY. And it just occurs to me that since they are there in the field, right in the county, and mixing and mingling with the farmers every day, and even on their farms, that they could supply some very valuable information. I do not see how the information could be biased.

Mr. BURKHEAD. I think right here that we ought to say that county agents do furnish information that we use.

Mr. ABERNETHY. Do you request it of them?

Mr. BURKHEAD. Yes, sir, we do.

The primary type of information they are furnishing now is used to prepare this weekly weather crop report. In a lot of States, the county agents are circularized by our people, the State statisticians, and they answer weekly questionnaires, giving information that helps us, not only on cotton but also on other crops.

However, we do run into a lot of difficulty there, as Mr. Wells stated.

Mr. WELLS. Those are comments. You still use the regular crop reporters.

Mr. NEWELL. Yes, that is narrative information, just crops, and it is rather difficult for a county agent to do that. However, we do use the county agents, as Mr. Burkhead said, on our weekly weather-crop comments. They provide quite a little very useful and valuable information on the progress and the development of the crop.

The statistician in travel frequently, most always, will contact the agent in the county.

Do you want to comment further on that?

Mr. BURKHEAD. The statement was made earlier as to whether you take the information and reduce it by 15 percent, or some percentage. Before you can reduce anything, you have to have a specific figure that you asked the fellow to report.

As has been said, we do not ask these county agents to tell us how much they think the crop is going to be. Of course, you know when you travel around the State you ask county agents and others in a heavy cotton growing territory what they think about the crop.

That is one of the main things in field travel, that is, to visit the county agents, but they do not specifically and systematically, Mr. Albert, report to us what they think the crop will be from month to month during a season.

There are a lot of objections on the part of the Extension directors to subjecting these county agents to duties other than what he wants them to do, as has been brought out, but primarily when it comes to actual indications of production in terms of bales, our information comes primarily from two sources: the farmers themselves, and from about 9,000 ginners.

Mr. ALBERT. If you got reports from those two sources saying that the production in Mississippi would be 2,000,000 bales, you would not change the figure on account of any other kind of extra information that you got, would you?

Mr. BURKHEAD. We might not unless we probed that very carefully, because, as Mr. Newell said, if your county agent is asked to report the production in the county, he covers that territory; whereas, if you asked the crop reporter how much is in his vicinity, he has a smaller area to report for and he knows that area better than the county agent would know a 20-square-mile territory. And he knows the acreage on his own farm, and he talks to others nearby.

So when you put those little bits together from the various reporters you have a better and broader coverage of the entire area for a State than the county agent can provide.

Mr. ALBERT. It just comes down to this, as I see it, either your reporting is not extensive enough, and that may require more money and it may be impossible because farmers may refuse to cooperate, or you are up against factors that you cannot estimate scientifically like a change in the weather, which nobody can predict.

Mr. WELLS. I think we should be quite clear as to weather conditions. We make no claims to predict it, and most farmers would not.

There are people trying to predict the weather, including long-range forecasts, but their progress is not such so far as to allow it to be used. That is a factor which, to me, is not an error in the sense in which we talk about statistical errors.

It seems to me the question on this comes to two things.

One, could we have improved the July acreage estimates? Could we have called the turn or the interpretation of weather conditions earlier than we did? I certainly wish we could have.

On improving the acreage estimates it seems to me we should find some way to do it. There are some ways, methods, which would very materially increase the accuracy of the estimates, but I think would require extensive field measurements which are time-consuming and costly.

One factor is the timeliness of the reports. We get the report as of the 1st of the month and release it as of the 8th of the month. You cannot do a lot of measuring.

One of the things which the letter suggests is that we increase the number of reporters. We certainly would like to do that.

Another is that the State statisticians do more travel, more field inspection, and more crop metering. We believe that would help.

And many of the comments lead to the suggestion that more judgment be put in this. And yet there are people who criticize the system on the ground that the State statisticians and the crop-reporting board use too much judgment. If you get into these folders you will find some charts showing the various indications from farmers and ginners this year as compared with last year, and the year before, and for the last 20 years, and as compared with actual yields. The statisticians take the average relation between out-turn and these indications. And there are in the State statisticians' offices conferences as to whether they shall make some judgment allowance, but it is a small one. We try to guard against personal judgment moving too far at the national level, by having the Crop Reporting Board where six different people make readings of what their estimate is.

There are some simple things which can be done which will, I think, improve our estimates.

I think we have to divide it into the acreage and into the yield components, Mr. Chairman, to go at it more or less scientifically, but the weather factor is still there.

Mr. ABERNETHY. I should like to finish this before we adjourn.

The fourth point is, reading further from the letter, "The Bureau of Crop Estimates should go back to boll counts and other types of estimates which were used prior to the war and which are helpful to some extent."

He does not say what other types. I do not know what he has in mind there, but I am familiar with the boll-count method. Has that been abandoned?

Mr. NEWELL. Yes, sir.

Mr. ABERNETHY. Was there any particular reason for the abandonment of it, Mr. Newell?

Mr. NEWELL. Well, it is all tied up, Mr. Chairman, with the reduction in travel during the war. We have not been able to take up boll counts since then. That was a system, as you know, of rather extensive routes laid out where we stopped and made counts at 10-mile intervals of various factors in the field.

That has not been used in recent years.

Mr. WELLS. May I add there one statement, Mr. Chairman, because I want to be fair to certain people.

The reduction in travel came, as I understand it, in 1941 and 1942, 10 years ago. I want to say that both the House and the Senate Appropriations Committees have been rather generous for the years since I have been the Chief of the Service, This reduction did occur ten years ago, and we have gotten rather good results the last 10 years without it, but we think it would be helpful, and we will try to find some way next season to increase travel.

Mr. ABERNETHY. We will have to adjourn this meeting. I am sorry to do so so abruptly, but we will have to. We will adjourn now.

I understand there will be a full meeting of the committee tomorrow. I would like to reconvene at a later date. I will notify you, Mr. Wells. In the meantime I wish you and the gentlemen with you who are directly interested in this problem and charged with the responsibility for its administration would make a very meticulous study of such manner and means as you think may be brought into being to improve it. We will want to hear from you a little further on it.

I appreciate the fact that you have a very difficult problem. At the same time, you appreciate the fact that we do not want another November 1951, if we can avoid it.

And subject to call, we will adjourn.

(Whereupon, at 12:15 p. m., the subcommittee recessed, subject to the call of the chairman.)

COTTON CROP ESTIMATES

MONDAY, JANUARY 28, 1952

HOUSE OF REPRESENTATIVES,
SPECIAL SUBCOMMITTEE OF COMMITTEE ON AGRICULTURE,
Washington, D. C.

EXECUTIVE SESSION

The subcommittee met, pursuant to notice, at 10:10 a. m., in room 1310, New House Office Building, Hon. Thomas G. Abernethy presiding.

Present: Representatives Abernethy (presiding), Grant, McMillan, Albert, Simpson, and Belcher.

Also present: John J. Heimburger, counsel, Committee on Agriculture; O. V. Wells, Chief, Bureau of Agricultural Economics: S. R. Newell, Assistant Chief, Bureau of Agricultural Economics, and Chairman, Crop Reporting Board; R. K. Smith, Vice Chairman, Crop Reporting Board; C. E. Burkhead, head, Field Crops Division; J. J. Morgan, Fiber Crop Section; Ella Sue Minor, statistician, Fiber Crop Section.

Mr. ABERNETHY (presiding). The committee will come to order, please.

We will proceed this morning not necessarily in any particular order. What we would like for you to do—I presume Mr. Heimburger has already given you some idea about that—is to take this book of procedures and go through it and give us a picture, I imagine that is what we will call it, of your general procedure.

May I suggest that any of you at any time you desire cut in while the other may be discussing it. In other words, I would just like for us to make a round-table discussion of this. I want to get a record of this procedure.

At the same time, I want to be as familiarized with it as I possibly can.

I do not know who you have designated as the spokesman. I do not know whether one is necessary or not, so I will just let you take over and take this book that you left with us and proceed to give us such information about it as you see fit.

Mr. NEWELL. Mr. Chairman, I think that Mr. Burkhead had better proceed with this. Mr. Burkhead, as you know, is chief of our Field Crop Statistics Division, and the cotton work comes under his direction. Mr. Morgan here is the cotton statistician. Mr. Smith is Vice Chairman of the Board.

I think, however, maybe the best thing to do to expedite this is to have Mr. Burkhead take over and go through the procedure and give you the picture as clearly as we can.

Mr. ABERNETHY. All right, sir.

Mr. BURKHEAD. Mr. Chairman and gentlemen, I have a statement here which is very brief. It might be just as well to read it to give you a sort of preamble as to what we are up against.

Mr. ABERNETHY. I think I appreciate what you are up against.

Mr. BURKHEAD. This statement I have here, primarily relates to the program as a whole, it is more or less, the outline of the program. It does not go into the details that the book will show when we get into it a little later.

There are many details to the procedure we use in estimating cotton acreage and production during the year. As we go through the month-to-month procedures they may become somewhat boresome, and I will try to be as brief as possible. Even so, it will take considerable time to go over a full season's details.

When we hire a new statistician we do not expect him to know the procedures for at least 2 years. I have been in the work almost 25 years myself and there is still much for me to learn.

We take for granted, of course, many of the details in our estimating procedures, and, for that reason, we may not be as clear about some of the points as we go over them as you would like. Where we are not clear we will be pleased to repeat the discussion and go as far as necessary in order that each of you may understand to your satisfaction how we estimate the cotton crop during a given year.

In the very beginning, I wish to say that the source of the information upon which the Crop Reporting Board bases its estimates is primarily from farmers and from ginners.

This is the general program.

I thought you would like to know what out calendar of events is during the year. Before discussing the minute details you may be interested to know what our cotton estimating program consists of, how many reports we prepare, and what they relate to.

We use a system of forms—work sheets, we call them. About a half dozen different ones is all we now use. These forms provide a uniform way of recording the various indications and the State statisticians' interpretation of each separate indication and; also, his final recommendation each month of the season.

As you know, by law, no information whatsoever can be gathered on cotton until most of it is already planted. By that I mean, we cannot gather intentions to plant cotton information from farmers.

Mr. ABERNETHY. There was a time when you could do that, but that was specifically stricken from the law?

Mr. BURKHEAD. Prior to 1924.

Mr. ABERNETHY. Yes, sir.

Mr. BURKHEAD. Our first report is an acreage forecast relating to cotton in cultivation July 1, and that report is usually issued about the 8th of July.

When we start through his book, a lot of the details about these various months will come to you better after we get through this outline.

In August, we make the first production forecast, based on the July acreage in cultivation, less 10-year average abandonment. Production forecasts are prepared on a State basis, with the United States estimate being merely a sum of the State estimates.

Mr. ABERNETHY. Let me ask you a question there, Mr. Burkhead.

Do they make an estimate at the State level and then send that in to Washington?

Mr. BURKHEAD. Yes, sir.

Mr. ABERNETHY. Do you accept their figures, or do you have some rules or formulas, or something that you apply to the State estimates?

Mr. BURKHEAD. Well, when the State statisticians send in their estimates to Washington, along with the supporting evidence, comments, et cetera, as to how he arrived at it, the Crop Reporting Board in Washington goes over the same procedure exactly, except that they have at their disposal what is happening in all States.

Mr. BELCHER. What do you mean by "they?"

Mr. ABERNETHY. Speaking of the State statisticians.

Mr. BELCHER. A part of his Department of Agriculture?

Mr. ABERNETHY. That is right.

Mr. BURKHEAD. That is the field office structure of our service.

So the five Board members each individually go over that information for each State and arrive at his estimate of the production from each individual indication and then he brings those together on a form of his own and arrives at what he thinks is the best estimate for that State, based on all indications available as of that time.

Mr. NEWELL. There is one other thing you have in Washington that you do not have in the field and that is the ginners' reports.

Mr. BURKHEAD. Yes; the final ginning reports.

At present 20 States produce some cotton, but only about 14 could be considered as important producers. Believe it or not, a little cotton is produced in Nevada, and a few hundred acres in Kansas, and some in southern Illinois, but very little.

Information as of about August 1 is gathered from cotton growers on the condition and probable yield of the crop.

You will be hearing more about the reported condition and probable yield as we go through these various procedures, because they are the bulwark of the information as provided by farmers.

The August estimate is based entirely on farmers' reports. Ginners' information does not become available to us until October 1.

Mr. ABERNETHY. I want to get this clear in my mind.

You stated that the August estimate is based entirely on farmers' reports. I am getting ahead of you, I know.

Mr. BURKHEAD. That is all right.

Mr. ABERNETHY. You have a form—and I believe this is the form right here [referring to a blue sheet]—you mail that out to a certain group of farmers, and it comes back, and you make your estimate entirely on the information supplied by the farmers on this form.

Mr. BURKHEAD. On that green schedule, Mr. Chairman, primarily.

Mr. ABERNETHY. I thought it was blue.

Mr. BURKHEAD. I guess we are both in position to be corrected. It is blue-green.

Mr. ABERNETHY. You have nothing else that works into the August report—it is just what the farmers say themselves?

Mr. BURKHEAD. Yes, as reported on this colored schedule, where we have the reported condition of the crop and probable yield per acre prospects. Of course, as we said the other day, we have field travel information that we gather from time to time. Of course, by August 1 you have a lot of comment from everybody else as to what the crop is going to be. However, let me assure you here that when

the Crop Reporting Board goes into executive session it considers all the information available. We have found over the years that you cannot vary from your indications and the analysis of your data as these charts indicate.

I want to say right in the beginning that anytime you make an estimate—I do not care what it is about, even though it may be the price of cotton, Mr. Chairman, that you mentioned the other day—you have a certain amount of subjective thinking that has to be done. You have a point of departure. The system we use to estimate cotton and other crops, it is to bring that margin, let us say, of subjective thinking as close together as possible.

I want you to remember that all during these forecasts, the making of them, there comes a time when there must be a little bit of judgment used. Do not forget that.

Mr. ABERNETHY. Is there some other schedule mailed out to the producers of other crops, such as corn, wheat, and so on?

Mr. BURKHEAD. Yes, sir; a similar schedule is mailed about the same time as the cotton report is mailed.

Mr. ABERNETHY. And is the initial estimate for all crops made on the same information as it is for cotton?

Mr. BURKHEAD. You mean from farmers?

Mr. ABERNETHY. What the farmers send in themselves.

Mr. BURKHEAD. Yes. Our first production forecast, let us say, varies by the season, of course, as to the crop—for corn our first forecast is as of July 1, that is, the production forecast.

As to winter wheat, is is December of the year before the year of harvest. In other words, this last December.

Mr. ABERNETHY. I realize the months would not coincide.

Mr. BURKHEAD. Yes, but it is based primarily upon information provided by farmers.

Now, back to the outline I have here.

A production forecast is issued as of September 1. This forecast is based on the July 1 acreage less estimated abandonment that has occurred since July 1. That has already been published. Here again no ginner's information is yet available.

I want to point out here that, as of September 1, we actually estimate the abandonment that has occurred since July 1. We do not take an average as we do in August.

Mr. MCMILLAN. In making these estimates, how much attention do you pay to these cuts in the district census offices in handling the bales of cotton?

Mr. BURKHEAD. The what?

Mr. MCMILLAN. The cotton district census ginning office.

Mr. BURKHEAD. We will get into that in just a minute, if I may delay you until later.

Mr. ABERNETHY. It comes along with the ginning season.

Mr. MCMILLAN. All right, sir.

Mr. BURKHEAD. At the moment we are on the second production forecast for the season.

Ginnings are not in sufficient volume to give us an indication of production. The law under which the census director operates says that he may forego the making of ginners' reports in August and September, except in those areas where cotton is actually being

ginned. Usually at that time; that is, in Texas and other isolated areas.

The forecast, therefore, is based almost entirely upon reports from farmers relating to the conditions and probable yield per acre prospects.

Mr. HEIMBURGER. You say that under the law, Mr. Burkhead, the Secretary can forego ginners' reports during September?

Mr. BURKHEAD. And August.

Mr. HEIMBURGER. And August. This year I think was there not something like 2,000,000 bales by September 1?

Mr. MORGAN. It was fairly large. I might point out there that in south Texas we do use ginners' data for making the September 1 estimate of production for south Texas.

Mr. HEIMBURGER. How do you get that?

Mr. MORGAN. That is done by the same process that Mr. Burkhead will explain later on. It just relates to a certain area in south Texas where ginnings are sufficiently advanced, and the State statistician uses those data for arriving at his production forecast.

Mr. HEIMBURGER. Except for that, you do not use the ginners' figures on September 1 estimate?

Mr. MORGAN. That is correct.

Mr. HEIMBURGER. Even though ginning may be, as in this case, one-eighth completed or more?

Mr. MORGAN. That is right.

Mr. BURKHEAD. As of August, I believe, ginnings have amounted to only about 5 percent of the crop?

So, in August and September it has been found that ginnings are so limited, except in those isolated areas, that it is not worth the effort, and the use you can make of the information is not worth the time it takes to get it together.

Mr. HEIMBURGER. Of course, a ginning is a very definite thing. Would not a sampling technique where you kept strictly accurate records of the outturn of some of those early gins give you a pretty good check on how your cotton was turning out? I distinguish from the general survey. I admit that there would be some that would be spotty; you would not get a general average, but could you not, over a period of years, locate certain gins and certain runs from those gins that would give you a pretty good comparative analysis?

Mr. BURKHEAD. We use the Texas data, of course.

Mr. NEWELL. We use what they have.

Mr. HEIMBURGER. On a sampling or a general report basis?

Mr. BURKHEAD. The sampling basis is the way we operate now.

Mr. NEWELL. You use it in the local areas where it is significant; is that not right?

Mr. BURKHEAD. That is right.

Mr. NEWELL. In south Texas enough cotton is ginned, so that the information is available to the office there, and it is used in the local areas where it is significant.

Mr. ABERNETHY. As I understand it, you use the information which is reported from those areas where it is normal for it to be coming in at that particular time?

Mr. BURKHEAD. That is right.

Mr. ABERNETHY. And in other areas where it might be coming in a little early, let us say, where it would be unusual for it to be coming in there at that time, you do not use it?

Mr. BURKHEAD. That is right, because normally it is very erratic, and you do not have much history available.

Looking at the back of the book a little bit, if you would like, we think that one improvement that possibly could be made would be to ask for a sample of ginners as of August 1 and September 1 to give us an independent estimate of what they think the crop is going to be. In other words, where you do that, if you were a ginner, you would receive a card, and you would report on that card the bales you have ginned to date which might be zero, and then, also, how many bales you think will be ginned the balance of the season. While we have not tried that but in a few areas—Tennessee, to be exact—we think that has possibilities along the line you are thinking about.

Mr. HEIMBURGER. It seems to me you could pin them down more than that. After all, the size of the crop is dependent upon two factors: Outturn and acreage. Could you not get them pinned down to outturn?

Mr. BURKHEAD. That is what we ask them for; it is their production forecast in number of bales—not acreage, not yield.

Farmers are asked, however, to report on acreage losses that have occurred since July 1.

There we are talking about the September forecast. A production forecast is made as of October 1. Except here we start using ginners' information. It is the same otherwise.

The acreage used in preparing this report is that published in the September report; that is, acreage for harvest.

Mr. HEIMBURGER. Your acreage has been adjusted on September 1 by the estimated abandonment from July 1 to September1; is that correct?

Mr. BURKHEAD. Yes.

Mr. HEIMBURGER. And then for October and November you use that September 1 acreage?

Mr. BURKHEAD. That is right.

Mr. WELLS. You will note this: If your July 1 acreage estimate is in error, that, of course, carries into the August 1 estimate where you use average abandonment and carries on into the September 1 estimate, because your abandonment estimate is a percentage estimate.

Mr. BURKHEAD. That is right.

Mr. HEIMBURGER. I want to get this clear. Your July 1 estimate itself is not revised until December 1; is that not correct?

Mr. WELLS. There is no check on it until the ginners begin to report in volume. But they do not distinguish between acreage and yield. They just say, "This is how much we have ginned—this is how much we expect to gin."

So, you do get an indirect revision of acreage with the October and November ginners' reports. Nevertheless, the basic July estimate does continue in use until December, except that it may be indirectly modified by the ginners' indications.

Mr. HEIMBURGER. But in spite of the fact that you do not publish a revised July estimate or any new acreage estimate until the 1st of December, you may, for your own purposes, have adjusted that July estimate for use in coming out with the other.

Mr. WELLS. When you begin to get the ginners' material, it will adjust automatically to a certain extent. I am making the point that

the July 1 estimate is an extremely important estimate; and, if it is off, you continue to be off that much for 2 or 3 months. I think that is a fair statement.

Mr. BURKHEAD. That is right.

I want to say this about the abandonment we get in September: We correlate that report of abandonment from farmers with the total abandonment that has occurred throughout the seasons in the past. Is that clear?

In other words, the reported abandonment that we have in September is read on a chart that is in the book here. So, in effect, then we are actually estimating in September what we think will be the abandonment for the entire season.

Mr. SMITH. Under normal weather conditions?

Mr. BURKHEAD. Yes.

Mr. WELLS. You are estimating acres for harvest.

Mr. HEIMBURGER. Your September 1 abandonment is projected forward.

Mr. BURKHEAD. To cover the entire season.

Mr. HEIMBURGER. So that you attempt at that time to estimate a final acreage harvest?

Mr. BURKHEAD. That is right. After July 1 we do not use that acreage as such any more during the season except as a point of departure to get our acreage that we use in August and September which relates to harvested acreage. While information on condition and yield per acre prospects are available from farmers, we have additional information from about 5,500 ginners. At present there are about 8,700 ginners in the United States.

What do we ask these ginners to report? By looking at the card here, you will note that we ask them for three things.

Ginners are asked to report as of October 1 on—

(*a*) bales ginned to date,

(*b*) number of bales expected to be ginned the balance of the season, and

(*c*) average gross weight per bale.

If you want to turn to the October tab, you will see that there are three questions asked these ginners.

Mr. MCMILLAN. How many answers do you get?

Mr. BURKHEAD. Out of 8,700 total ginners, we get back roughly 5,500, about two-thirds of them.

Mr. ABERNETHY. That is a pretty poor average for ginners; is it not?

Mr. BURKHEAD. We think it is good. I will tell you why. As you know, we do not send these cards out ourselves. We used to, but in order to avoid duplication we have an arrangement with the Bureau of the Census whereby this information that they gather by law, they make a sample of it available to us each month.

They do not get, and could not possibly get, by the time we would need it, a report from all of these 8,700 ginners.

Mr. ABERNETHY. You then say that the time element is involved there?

Mr. BURKHEAD. Yes.

Mr. ABERNETHY. Well, eventually, then you get reports from a higher percentage; do you not?

Mr. BURKHEAD. Eventually, we get reports from all of them, because in making the forecasts for October, November, and December, the Census Bureau brings over to our office on the day of release the final ginnings from all the ginners, and we use that in making any correction that needs to be made in the uses of the sample information that we have used before this was available on the bales ginned to date.

There are two fundamental things that we have to have from ginners in estimating the cotton crop. One is the bales ginned to a given date. The other is the percentage of the crop which has been ginned to date.

And you see, from those two indications, you can project or calculate the total crop, by dividing the bales ginned to date by the percentage ginned to date.

There are a few other corrections that we make in that index which we will get into later.

I want to cite this: that the use of ginners' information is a little complicated. So, if we are not plain or clear to you, we will stop and try to show each point as best we can.

From this type of information, we calculate an indication of actual production—by adding the bales ginned and to be ginned and expressing the bales ginned to date as a percentage of that number, then dividing this total by the percentage ginned to date and adjusting this for bale weights and cross-State movement. By this we derive an indication of production. We will get into that in more detail later.

You gentlemen from the cotton States know that all of the cotton you produce in a given State or county is certainly not all ginned right there in that same county or State.

So, at the end of the year the Census Bureau provides us with two figures: the total amount of cotton ginned in a State, irrespective of where it came from, and the amount of cotton which was grown in that State. From that we calculate what we call a cross-State seed-cotton movement factor.

For instance, in Mississippi, I do not know what the factor is down there. Mr. Morgan, do you remember that offhand?

Mr. MORGAN. No; I do not.

Mr. BURKHEAD. We multiply bales ginned by this so-called percentage.

Mr. ABERNETHY. You have a historical formula for that?

Mr. BURKHEAD. Yes; we work it every year.

Mr. WELLS. May I add, Mr. Chairman, that this, of course, becomes quite important if you get into situations, as you remember 2 years ago, when trying to estimate cotton produced by counties and districts for quota purposes.

So this interstate and cross-county movement is important. One of the things which is bothering me, at any rate, is the question as to how adequate our district and county estimates may be if we should find ourselves again faced with allotments and quotas.

Mr. MCMILLAN. That is what I was thinking about.

Mr. WELLS. It is one of the things that the Chief of the Bureau worries about.

Mr. ABERNETHY. Especially if we take this year's acreage estimates and work it in.

Mr. BURKHEAD. We fared pretty well this year.

Mr. WELLS. You know the problem we got into 2 years ago. Nevertheless, this is the best single indication that we have.

Mr. ABERNETHY. All right, you may proceed.

Mr. BURKHEAD. So much for the cross-State factor, which is an important thing.

I might say, too, in estimating cotton it is necessary to use the refinements, we think, in working these various indications, probably to a greater extent than in estimating any crop, because you are dealing with a 500-pound bale of cotton. That is a lot of cotton. We try to be fair with all States and use all available information in such a way that each State will get exactly what it is due.

This indication, of course, is read on a regression chart in order to observe how good it has been in the past. You will find lots of those charts in the book here. We have some larger ones back here that you may want to look at.

We will go into that in more detail later—just how ginners' information is converted into indications of production and used by the Board in making the forecasts.

It is necessary to estimate the amount of cotton which has been ginned to date in using the ginners' information. This will be explained later. Therefore, for October we have indications of production from farmers and also from ginners. This is the first time that we have coming into the picture the information from these six-thousand-odd ginners. And I might say, as you have already heard, I think Mr. Wells and Mr. Newell mentioned, that in 1951 that was one of the indications which pointed to the fact, that is, the difference between the indications from growers and from ginners that possibly our acreage was too high. Why was that? For the simple reason that when you analyze the ginners' indications you got in some States a lower indication of probable production than you did from using the condition factor and the yield per acre factor reported by farmers.

We will go into these charts later.

Mr. ABERNETHY. Were your early acreage estimates based on entirely what the farmers themselves reported?

Mr. BURKHEAD. Yes.

Mr. ABERNETHY. Did you take into consideration the fact that the Secretary of Agriculture in announcing the goals specifically directed the attention of every single cotton farmer in the belt to the fact that his future acreage, in the event of allotments, would probably depend on what he planted in 1951, which was an inducement to every cotton farmer in the belt to be sure that he overestimated, instead of underestimated his acreage?

Mr. BURKHEAD. If I was a cotton grower, which I am, I believe I would keep that in mind, but we have found over the years that crop reporters, reporting to the Department, come nearer telling the actual facts than they would if they were reporting to a Government agency under an action program.

Mr. ABERNETHY. I realize that, but they were making a written record to which they are presumed to have signed their names, which, I think, everyone reasonably will assume that his name appeared on the form, that this would be a controlling factor in establishing his acreage allotments in the future.

The reason I bring that up is because I think that is something you are going to be confronted with every year from now on.

Mr. BURKHEAD. I think you are right.

Mr. ABERNETHY. They are all impressed with the fact now that the day is coming when we will more than likely go back to acreage control. They remember the trouble they had in 1949 when acreage allotments were being worked out for the 1950 crop.

I have found very few of them that were happy and believed that their acreage was in line with what they thought they had grown. In fact, I think the over-all estimates of acreage that they turned in themselves was around 35 to 37 million acres.

Mr. BURKHEAD. I think we had to adjust it rather severely.

Mr. ABERNETHY. I know we had to adjust it. There is no question about it.

Mr. BURKHEAD. I think we all went through that battle up here together; do you not remember? It was about a 30-percent adjustment.

Mr. ABERNETHY. Is that not significant? Do you not believe that they would be encouraged in filling out these forms, to be certain that they did not underestimate, but if anything, overestimate in order to work the reported acreage into the planting average in the event of acreage allotments?

Mr. BURKHEAD. In fairness to you we feel absolutely the same way you do regarding 1951. We think that is possible.

Mr. ABERNETHY. It is possible for that to happen in the 1952 reports or 1953 reports, I think.

Mr. BURKHEAD. Well, we will have this history behind us. We do not care how a fellow reports to us, whether it is 10 percent to high, or 10 percent too low, or even on the button, so to speak. We can take the bias out of those figures by means of correlation charts or plotting the current indications against history.

In one of these charts you will see where ginners always overestimate the percent of the crop ginned to date. Therefore, you will find our readings way below the so-called line of equal proportion.

Bias does not bother us so long as we can detect its direction, because we can allow for it. Bias, as you know, is the tendency for a series of data—and tendency, I say—to be either too high or too low. We are always bothered with this bias factor.

If it was not for the bias factor, we could, probably, do a better job on many of our estimates.

Mr. ABERNETHY. I think this matter of calling on the farmer to estimate his acreage, which inevitably is influenced by the acreage-allotment program, is something that has got to be discounted in some shape, manner, or form in the future.

I think, also, that that may be a good argument to be advanced for the measurement, at least, a sampling measurement of acreage which was proposed last year, and for which I realize you gentlemen did not have enough money. I think we earmarked a million dollars for that program. I realize that is insufficient. I am wondering, in order to improve and not have another November and December as we had last year—I am wondering if it would not be a good idea for us, at least, to consider for the time being some system of measurement, not for the purpose of using it in making acreage allotments in the future, but for

the future in assisting you gentlemen in making your estimates of crops.

Mr. BURKHEAD. You are right.

Mr. WELLS. May I interject a remark here, Mr. Chairman?

As Mr. Burkhead said, there are many instances where you have bias. If the bias is rather consistent year after year, high or low, and you have that experience, you can allow for it.

As Chief of the Bureau, I do not take a part in the actual estimating of cotton. But various well-informed persons do call me and tell me we are too high or too low. In all fairness to the crop reporters, the year before last when we had marketing quotas, there were a great many well-informed people who felt that the crop reporters were, probably because compliance was involved, underreporting their acreage planted. I got many calls 2 years ago from persons who were asking whether farmers were underreporting their acreage because of a possible compliance checks—they knew they were going to be measured.

If I remember correctly, the reports 2 years ago on the reduction were almost exactly, the July reports, in line with the final estimates.

Mr. BURKHEAD. Yes.

Mr. WELLS. This year I received some reports on the other side. It is something that worries you.

On the measurement side, I would like to say this. We have, among statisticians with whom I am acquainted and have been for 25 years, an interest in actual measurements. I think the answer is almost the one you gave here, that this year having provided, I believe, a million dollars which PMA might use to measure cotton acreage, they found themselves in the position where that simply was not enough money to start the task and carry it to a place where they thought they could be fair to farmers generally.

Mr. ABERNETHY. And the cost of the program that was proposed to the farmers, where they could come in and have their acreage measured, if so desired, was just such that they did not take advantage of it. I think maybe there were only three or four people in my community that reported to the PMA that they wanted their acreage measured.

Mr. WELLS. As statisticians, there are certain sampling and measuring devices that we would like to use, but I must call your attention to the fact that it begins to run into money fairly soon, and that the appropriation for the entire crop reporting service, estimating all crops, classes of livestock, yields, utilization, and various other things is about $3,000,000.

Mr. NEWELL. Yes.

Mr. ABERNETHY. You have only $3,000,000?

Mr. NEWELL. The appropriation was actually $2,848,000.

Mr. WELLS. The budget proposal for the coming year, for fiscal 1953, after allowing for Pay Act costs, is about $3,000,000. It was actually less than that last year.

Mr. ABERNETHY. That is for making reports on all crops?

Mr. WELLS. All classes of livestock, all crops, utilization, prices received, and prices paid by farmers, and a considerable number of other series.

The Crop Reporting Service estimates the prices received and prices paid which are used to calculate parity prices. We also estimate the utilization or disposition of many of the crops.

What I am saying is that you are getting into a field which many of us have talked about for 25 years, but it is, also, a field that would take sums considerably in excess of what we now have. I must assure you of that.

Mr. ABERNETHY. I understand.

Mr. SMITH. Referring to this matter of the bias in July, we have to remember that these same farmers came back and gave us their acreage in December, which was the basis for lowering our acreage estimate then.

I mean that the later surveys were made of those same types of farmers, so that you do have psychological effects of a program that are extremely difficult to measure.

Mr. WELLS. We should, also, add that in an effort to try to see that these farmers are not penalized by reporting the correct acreage, we do our best to maintain the position that the data which they report to us is confidential data and not available to other agencies for use in terms of their particular farms or as individual reports.

Mr. ABERNETHY. Do you think it would be advisable to insert a brief statement on that form that this information, with regard to acreage, will not be used in the calculation of acreage allotments?

Mr. WELLS. We generally assure them that the individual information is confidential.

Mr. NEWELL. The policy has always been that this information that we collect is confidential.

Mr. ABERNETHY. I know the policy may have been that, but the form does not disclose that.

Mr. SMITH. On the back of this June card it states that it will be kept confidential. That is the June acreage survey.

Mr. ABERNETHY. It will be kept confidential, but he knows that that information is in the hands of the Department which is going to fix his acreage allotment.

Mr. BURKHEAD. I do not think you fool anybody.

Mr. NEWELL. There is one other thing that I would like to bring out that was a factor. You had about 50 percent increase in acreage this year. And it is always difficult with our techniques to measure sudden shifts and changes in acreage—to catch it currently.

I just wanted to throw that in, because that is another factor that was in the picture this year.

Mr. MORGAN. As Mr. Wells pointed out, we have been up against this factor of bias since we have been making estimates, We have devised certain procedures to give us as much information on bias as possible, and procedures that would eliminate bias.

One of those procedures is that we ask the farmer how many acres of cotton he had last year at this time. We, also, ask him how many acres he has now. If he puts the same bias in his last year's acreage as he does in this year's acreage, the percentage change that we derive will be correct, irrespective of the level of his bias.

So that is one of the fundamental methods we have in our estimating procedures.

Mr. HEIMBURGER. You applied all of these bias adjustment factors to your July estimate this year, did you not?

Mr. BURKHEAD. That is right.

Mr. HEIMBURGER. To what do you attribute the fact that you found out later that the July acreage estimate was considerably larger than it should have been?

Mr. BURKHEAD. To what do we attribute that, Mr. Heimburger? We attribute that to the fact that we have to estimate cotton in cultivation July 1. This year, if you know anything about cotton, a lot of cotton was going in and going out fast around July 1.

We are very confident of two things: One, that farmers got into their acreage in cultivation in July 1, or reported cotton that was standing then that actually was lost before that date. When that, as Mr. Wells said, once gets into our July 1 acreage estimate, it is going to stay there until the end of the season, because that is the base we use to estimate the acreage for harvest for our August forecast and for our September forecast, and also, November, too.

Mr. HEIMBURGER. Could you help eliminate possible errors like that by asking them on the same form, where you ask for the present cotton acreage, that acreage they now think they are going to harvest?

Mr. MORGAN. That is the way the questions are asked, acreage that you now have in cultivation on July 1.

Mr. HEIMBURGER. I am looking at your special cotton acreage inquiry here—"total acreage of all land", "acres now in cotton", "acres in cotton last year", "acres harvested last year." Would it help to have a third question, number three, read, "How much of this acreage do you think you will harvest this year?"

Mr. BURKHEAD. In July?

Mr. HEIMBURGER. Yes.

Mr. BURKHEAD. Well, we assume that you would have very little difference.

Mr. HEIMBURGER. I assume that you would, too, ordinarily, but this year you might have had several acres of cotton standing out there that the farmer thought on the 1st of July he would have to plow up.

Mr. BURKHEAD. What we are thinking about as an improvement would be if we can get around some of these regulations, that is, the the law, is to ask for the actual cotton planted, how much did you plant, and then take off the actual losses. That is the way we do for every other crop. You plant so much up to a certain time. You have lost so much. At the end of the season you know how much you have harvested.

The other one is a possibility like this: Ask the grower how much cotton he planted and how much he has standing on July 1. Let him report that first figure.

Mr. HEIMBURGER. It seems like it would be helpful if you got some comparative data in there for the same year showing movement, abandonment.

Mr. BURKHEAD. We are going to seriously consider that for the 1952 season.

Mr. HEIMBURGER. Let me ask you this, as between these two forms, the special cotton inquiry form and your general form which you send out to cover all crops, is your response any better on one than on the other?

Do you believe that one is more accurate than the other? That is two separate questions.

Mr. BURKHEAD. Would you go back and ask them again?

Mr. HEIMBURGER. Is the response any better on one than on the other?

Mr. BURKHEAD. Look at the front of your book. The response to your cotton schedule is higher.

Mr. HEIMBURGER. I thought it would be. It seems to me that the average farmer on receiving one of those, asking for only a little bit of information about one crop, would be much more likely to respond than if you asked him to fill out this longer, more complicated general crop form.

Mr. SMITH. The percentage return from the June acreage schedule in this last year was larger than from the special July cotton. Why I do not know, except that you do have this sort of a thing, that your timing is much closer on your July cotton schedule, the time when you send your schedules out and the time they have got to be back in the office, so that you do not have an opportunity to use many late returns.

Mr. HEIMBURGER. Which of these do you give the most weight to in estimating the July acreage?

Mr. BURKHEAD. The cotton schedule.

Mr. MORGAN. The June acreage cotton card is mailed earlier. July cotton schedule ties it to the July 1 base.

Mr. BURKHEAD. To clear up this business of percentage returns, Mr. Chairman, that is an elusive figure in that it all depends on whether you count the number of schedules returned or the number you actually tabulate.

In all of these reports, we have a cut-off date beyond which we cannot take any more returns, otherwise we would be late with the report. We have deadlines staring us in the face all of the time.

Mr. HEIMBURGER. You would tabulate all of the returns, that is, all of the usable returns?

Mr. BURKHEAD. That we possibly could.

Mr. HEIMBURGER. Before the deadline.

Mr. BURKHEAD. That is right.

Mr. HEIMBURGER. So that actually this figure represents those usable returns received by your statisticians.

Mr. BURKHEAD. By the time of the cut-off date.

Mr. HEIMBURGER. Before the deadline.

Mr. BURKHEAD. Yes, in July 1951, for the July cotton schedule we mailed out 71,000 and got back about 12,000 schedules.

For the June acreage report, we mailed out 131,000 and got back about 32,000.

As Mr. Smith says, there is more time available for using June cards than there is for the July cotton schedule.

Mr. HEIMBURGER. They are not so useful in estimating your July 1 acreage.

Mr. BURKHEAD. Mostly for harvested acreage; yes.

Mr. ABERNETHY. According to your table here, your June acreage schedule, you had a return of about 24 percent, and on the July cotton schedule you had a return of about 16 percent.

Mr. BURKHEAD. Yes.

Mr. ABERNETHY. That is, plus.

Mr. BURKHEAD. Yes; some of the difference in the percentage return depends on whether they mail out a second request or not.

On cotton, I daresay in most years in most States you would not have time to send out a second request.

Mr. ABERNETHY. Who selects the people to whom these cards will be mailed?

Mr. BURKHEAD. That is done by the State statistician's office.

Mr. ABERNETHY. He is down at Gulfport in my State. If he wants to send these cards out to 100 farmers in Lee County, Miss., which is 350 miles away, how does he get the names? Whom does he get his list from?

Mr. BURKHEAD. The list in the average State statistician's office is something which has taken many years to build up. You do not just grab a list every year from somewhere and say, now, we will mail this card to this list of men. It has been going on in the Mississippi office for maybe 25 years, where you have adds and drops. We have access to the PMA lists of farmers.

Mr. ABERNETHY. I know that he cannot go way up there and pick up the list himself. He cannot go up there even for the purpose of revising it.

Mr. BURKHEAD. That is right.

Mr. ABERNETHY. Who in Lee County, let us say, to use an illustration, would he get the information from? Would he get it from the PMA office?

Mr. MORGAN. About 2 years ago Mr. McCandliss obtained a full list of all PMA names from Mr. Neal.

Mr. ABERNETHY. I am using this as an illustration, and not speaking of my State specifically.

Mr. MORGAN. As Mr. Burkhead said, in practice in most States the statisticians have access to the PMA lists. Most of the State PMA offices provide them with sample or full lists.

Mr. ABERNETHY. You gentlemen are experts in this field. I am not. I am trying to find out how it is done. I throw this out for what it is worth.

Would the agricultural office in each county not serve a good purpose, if they would supply themselves annually lists of certain farmers in the county to whom these cards should be mailed?

Mr. BURKHEAD. You mean the June cards or the cotton schedules?

Mr. ABERNETHY. Both.

Mr. BURKHEAD. Last year, of course, we got 110,000 names from PMA systematically drawn by taking about every tenth name from their lists. We could use that list and will use it several years to build up our cotton list and our regular crop-reporting list.

I do not know how many Mississippi has, but I am sure he gets back an average of roughly a thousand schedules on cotton per month.

Mr. ABERNETHY. The point I am getting at is this, let us say that you have been sending me one of these cards over a period of several years, and I have never returned one. There are undoubtedly, many cases of that kind since you do not get back but a very small percentage of them.

Mr. BURKHEAD. That is right.

Mr. ABERNETHY. Why would not the PMA officer Jones in X County be better able to determine, or some other agricultural office, and prepare a list of farmers who would take an interest in cooperating with you in making these reports?

Mr. BURKHEAD. That is all right.

Mr. ABERNETHY. What is wrong with it?

Mr. BURKHEAD. We are doing that all of the time with county agents, PMA, and others. What you have to watch out for in getting a list like that is selectivity.

Mr. ABERNETHY. I realize that you have to watch out for selectivity; but in the end you have got to depend on some Government employee to get you information.

Mr. BURKHEAD. We do.

Mr. ABERNETHY. So it occurs to me that the man that could get you the best information and the most accurate information would be your agricultural agent or PMA officer or someone connected with agriculture in that immediate vicinity.

Mr. BURKHEAD. I say, we make use of all of those sources of information. They are providing us names all of the time. We are using those names from time to time to fill in our regular list.

Mr. NEWELL. As a matter of fact, we did have a fairly complete list from PMA this year. We used it all throughout the whole area. We do use the county agents to provide us names of people regularly. We contact the county agent for that purpose. Furthermore, from our rural-carrier acreage cards we, also, have a source of names for our lists.

Working up lists is one of the most important jobs in a State statistician's office. It is difficult. It is time-consuming. If you have not reported for several months you would probably get a letter. And if you did not report, then you would be dropped, and then we would try to pick up somebody else, and continue until we got a cross section for the State.

Mr. ABERNETHY. Here is a letter I received just a few days ago:

> I sent into the crop-reporting office at Gulfport, Miss., condition report on cotton in August 1951. I did not receive another blank to fill out until December. I cannot find any farmers around that have sent in a report in September, October, or November.

That may be an isolated case, but these blanks go back, or are they supposed to go back to this same farmer every 30 days?

Mr. NEWELL. On the regular lists; yes, sir. I do not know what could have happened there, if it was a reporter on the regular list.

Mr. BURKHEAD. Something must have happened to his address. Maybe he could be mistaken. As you know, there is much Government mail going to farmers these days, and they get mixed up as to which agency is sending what. I say that in all fairness to all Government agencies. I know. I am a farmer, and my father is a farmer, and he raises cotton. He tells me many times he gets mail and throws the crop-reporting schedule away because, well, not that he wants to, but that he is getting mail from so many Government agencies.

Mr. ABERNETHY. All right. Maybe we are spending too much time on one point here.

In 1951 you got on the July cotton schedule 60 percent of the reports. In other words, you mailed out a certain number of inquiries, and you received a return of 60 percent. Do they drop those every year, just pay no attention whatever to these returns, or, do you just continue to mail them to them?

Mr. BURKHEAD. This work, as Mr. Wells said in his statement the other day, is a continuing and difficult process. It is the backbone of the Federal crop-reporting service, in that we have to depend upon the

mails for our samples. So these State statisticians spend a lot of time in keeping their lists up to date.

Of course, a lot of schedules will come back that are late and that are not shown in this record. But all of those who have changed addresses, who have died, or who wish to be removed, or, in many cases, those who want to be put on the list, are taken care of.

Our lists are purged, as we call it, continuously. In general, in the Federal crop-reporting service in this country the building up of a list of reporters, the list itself now, is not a difficult task because we have the State assessors' rolls in 14 or 15 States, we have our rural-carrier cards that go out—last year 254,000 cards that were mailed in Cotton States, and 69,000 that came back—from that source alone you see that we could double our cotton lists any time we wanted to.

Mr. NEWELL. I think what Mr. Abernethy's question related to was whether we have regular crop reporters and whether they get the schedules every month.

Mr. ABERNETHY. I do not mean to say year in and year out, but over a reasonable period of years do you take some out and bring in some new ones as the years go along?

Mr. NEWELL. The list is worked constantly. There are some 90,000 all together, not just in cotton, but the whole regular monthly reports, some 90,000 farmers that are used.

Some of them, as I said the other day, have been reporting over a long period of years. The experience in Kansas was very illustrative, where 32 farmers came in who had been reporting more than 35 years continuously. One of those, incidentally, was the second-generation farmer. I think that is what you were getting at.

Mr. ABERNETHY. It occurs to me that you get back a very low percentage of your reports.

Mr. NEWELL. That is right.

Mr. ABERNETHY. I do not know whether that is typical. Your 1951 schedule shows that your percentage has been very low. If that is typical, then it occurs to me that you could obtain better mailing lists.

According to the information here in this file, June acreage schedule, number of schedules mailed, 130,000; that is in round figures; number tabulated, 31,000; that is 24 percent that you got back.

July cotton schedule, 71,000, and you received 11,000.

In your special supplemental list survey, you sent out 110,000, and got back 28,500; that looks like an estimated figure, because those are in round figures.

That is a very poor percentage. The response is not good. If that has been typical throughout the years in the past, it occurs to me that some system could be devised with the help of your agricultural agents and PMA officers and so on in each county to improve your list and get a much better response from it.

Mr. NEWELL. I think you are right.

On the over-all schedule monthly reports for the general crops, we get about 32 percent return on the average. This matter of improving the returns is one of the things that has given us a great deal of concern. As a matter of fact, in Mississippi it just happens that Mr. McCandliss and we are working together on the various techniques of trying to get better returns, use of better, distinctive envelopes, a distinctive schedule, and things of that sort which are being tried out.

And some of them seem to have some possibilities. There are

other things that we find might improve our returns, that is, the matter of more frequent contact in the field with the reporters.

A reporter is much more apt to report to you if he knows you or if he knows something about the work that you are doing. There are a number of things, I think you are right, that ought to be done to try to improve this return. We certainly try to do as much as we can, and hope to do more.

Mr. ABERNETHY. Of course, you know we just have some people who do not care to make the return.

Mr. NEWELL. That is right.

Mr. ABERNETHY. You have some that neglect it, and some that are not interested in it, and some who are interested in it. It appears to me that you could build up a mailing list in a very simple fashion through these county agricultural representatives of people who will take a tremendous interest in making these reports every 30 days.

Mr. BELCHER. Along that line it looks to me like either through the PMA office or maybe your department or some other, if there was some way to contact a group of farmers and ask if they would like to become an official crop reporter and have them sign up a card and have them receive an appointment as an official crop reporter, it would help.

You know, all of us are just a little vain, and we like to get appointed to something, rather than just get an ordinary circular through the mail. Every farmer, as Mr. Burkhead said awhile ago, is getting a lot of Government mail, but he is getting a lot of other mail, too. He is getting all kinds of reports which say, just check here and you will receive information on a brand new cotton picker, and so on. He is consistently being besieged with a whole lot that he has to sign up and send back to somebody, to the point where the public has now reached where they pay little attention to any of it. I think if there were some way ahead of time, before any report is sent to this man at all, of having him receive an appointment as the official crop reporter for his area, I think you might improve that.

That is just a suggestion. The fellow would pay much more attention to it if he felt that he was one of the selected ones who were supposed to fill out this report, and that the Government was depending upon him, and that if it was not taken care of, why, that would be just a shirking of a duty that might throw off the entire reporting service.

I think he would accept that responsibility much more than just receiving an ordinary report through the mail, that he figures every farmer in the community gets.

I imagine they do. Every cotton farmer in America is getting the same thing. And if he does not fill it out, his neighbors will, anyway, he feels. Of course, we are all negligent about sending those back.

Mr. BURKHEAD. That is the thing.

Mr. HEIMBURGER. When you put a man on your regular list as a crop reporter, do you send him a letter and puff him up and tell him what an important cog he has become in the machinery of Government, and that sort of thing?

Mr. NEWELL. Generally speaking; yes.

Mr. SMITH. That is true, generally speaking. Also, in many of these States, we send out constant reminders of that responsibility.

I want to get back to this statement. On these lists that we have set up there are none of these people who have not shown an interest because the lists are built up over a long period of time from those people who have shown some interest in reporting.

Mr. HEIMBURGER. How long do you carry them after you do not hear from them?

Mr. SMITH. The offices are supposed to drop them within about a year or 2 years, depending upon the type of inquiry. On an acreage report where they may only get one or two schedules a year, you are not sure.

Mr. HEIMBURGER. You want to cover a broader base.

Mr. SMITH. And you are not sure whether they missed returning it that year because of no interest or have just laid it aside.

Mr. HEIMBURGER. These monthly condition reports go to the regular cotton-reporter lists?

Mr. BURKHEAD. Yes.

Mr. MORGAN. The schedules are checked off.

Mr. HEIMBURGER. The point that Mr. Abernethy is making is that you should get a larger return.

I have inquired just casually of three or four different agencies, most of them in the publishing business, I will admit, who send out periodic questionnaires of market surveys and that sort of thing, and they tell me that they anticipate in the neighborhood of 40-percent return just from a casual market-survey inquiry to people who have no more interest in the thing than that they happen to subscribe to their particular magazine.

Mr. WELLS. May I interject here a moment?

First, you asked whether you may be paying too much attention to this. I do not think you are.

I visit the State statisticians' offices. They are the ones who keep the lists up. You will find statisticians who have good working relations with the county agents and who do get from the county agents the names or suggestions of farmers who may become regular crop reporters. You will find them using in States where we have cooperation, the State agricultural or farmers' census, using the county assessors. You will find from time to time their taking names off PMA lists. But the real problem in the end is to select a group of people who report accurately and who continue to report over a period of time. I think that if you talk to the State statisticians, you will find that is one of his most difficult problems.

I have been concerned with it, and still am. I do not think you are paying too much attention to it.

Mr. ABERNETHY. Ordinarily, there is a minimum that generally takes the most interest in agriculture. It appears to me that the PMA committeeman would make excellent reporters.

Mr. WELLS. If you are going to improve these lists, it will require work. Our statisticians have been working on this for 20 or 30 years now. But some way has got to be found of having more contact between the State statisticians' office and the reporter; that takes time. I think that a person who has had personal contact and who has had explained what is wanted is a much better reporter than just the fellow who has written a letter, a form letter. And that is about the only thing that we can now do.

Mr. ABERNETHY. I understand that.

Mr. WELLS. On our prices paid and prices received work, for example——

Mr. MCMILLAN. You might put them in blue or red envelopes.

Mr. WELLS. As a matter of fact, Mr. McCandliss from Mississippi has designed a special envelope. And after 2 years of argument we have gotten the Post Office Department to let us use it in certain places, experimenting.

We had good reason to believe that as we moved into this defense crisis and price control was reinstituted, the Office of Price Stabilization, that we were going to have trouble with prices. And with the funds Congress supplied us with a year and a half ago, we have established in 12 States an expanded program on prices paid and prices received. It is fair to say, also, with the institution of the Office of Price Stabilization and various other controls, since we get most of our reports from local merchants and businessmen who are now getting many other Government reports, there is a strong tendency for returns to go down in all States except where we have a man whose special business it is to try to keep price reporter lists up and improve our price estimates, and who has enough time to give personal attention to some of his contacts.

I think it involves not only a question of getting names, but in the end it will involve a question of how you do get and maintain some kind of personal contact.

Mr. MCMILLAN. I agree with you.

Mr. WELLS. Many of the state statisticians try to do it. To do that, it takes you away from your statistics and away from your office into the field of personal relations quite a bit.

One of the problems we have to look at is how to allow these people more travel time to look at the crops and, also, to see reporters.

Mr. ABERNETHY. Not that I am attaching too much importance to it, but I heard several farmers say this, that they had heard a lot about these inquiries, but like the Gallup poll, they had never found any that had ever received any of them. That, unquestionably, is an exaggerated statement, although they may themselves not have found anyone.

I do not have any doubt but what the inquiries went out.

Mr. BELCHER. In what I said I do not mean to have that taken as a criticism, because without knowing anything about it, I think your return is very good. I was just making a suggestion for an improvement, because I am amazed that you get back only 25 percent.

Mr. BURKHEAD. In some States, Mr. Belcher, we get back over 50 percent.

Mr. BELCHER. I think the return is very good. I was not offering any criticism of the number that you are getting back.

Also, I understand that on any kind of a mailing you are going to have a lot of people say, I never do get one of them and I never hear of one of them, and you may find it on the man's desk.

Mr. WELLS. I will be technical for just a moment.

Your commercial companies quite often use what they call second and third waves of mailing.

Mr. HEIMBURGER. That is true.

Mr. WELLS. Our system works fast. One of the questions which has been raised with me is, when do these people fill out their questionnaires? You mail your schedules out so that the farmers only get

them 2 or 3 days in advance of the time they are to fill them out, and you have a deadline 2 or 3 days after that. You cannot use second and third waves of mailing.

That is one thing that differentiates us and the commercial companies. There is an additional item, though. You still do not know who is sending your questionnaires back and who is not. And if it were possible, one of the things that we need is some way of sampling what the statisticians call nonrespondents, the people who did not send a questionnaire back, because in an open mailing you may get selectivity in the kind of persons who send it back and the kind of persons who do not.

And unless we have some check back against the nonrespondents, we are never sure statistically of what we are talking about.

Mr. McMillan. I think that is what the chairman was driving at, to get it down to the PMA level, to see about that.

Mr. Wells. We need some way of checking nonrespondents. We are faced, if you really want to improve the system over the long run, with the problem as to how to check back on nonrespondents, and to be sure that we have not got selective answers.

Mr. Abernethy. I could select a list of farmers in my county where you would get back 90 percent of your returns. I just think it can be done.

And the person first to go to to consult about that list would be the county agent and the PMA representative in the county.

Mr. Belcher may be right that 24 percent is a good return, but I do not agree with it.

Mr. Burkhead. It is. This list business is a science as Mr. Heimburger knows. These commercial people do not spend their money for nothing.

When you say they got back 40 percent, they must have mailed out, at least, three or four waves.

Mr. Heimburger. I do not know about that. I asked what return they would expect from a mailing, and all of them answered somewhere in the neighborhood of 40 percent.

Mr. Abernethy. The object, we will say, is to get 25,000 reports, and you mail out 100,000.

Mr. Burkhead. That is really the science of it, Mr. Chairman.

Mr. Abernethy. But the fact remains that you are getting reports from a group of people who do not display much interest in reporting. I am speaking of the group as a whole.

Mr. Burkhead. I think you will find the one mostly interested is the one who will return the schedule. As Mr. Belcher says, there are two ways that we have found out that you can get them back. There are, perhaps, three ways that you can build up this return.

One is to see him personally. There is nothing like a visit with the man. He will remember you. Remember, though, that when you visit the fellow, if he is a voluntary reporter, you will find over a period of time that his percentage of response begins to drop off. There is nothing in the world you can do to keep a man reporting unless you recontact him. But a personal letter will do it, stating, "We missed your report last month."

A lot of reporters will write back, "I did not think you paid any attention to my report, but I see you do. I will report every month from now on."

Mr. ABERNETHY. I do not think there is any doubt but what you will have to revise it from year to year.

Mr. SMITH. We have had experiences where we have gotten 75 percent return on the list. One of our recent experiences was about 3 years ago, where we had a small survey. We sent people out to visit these people, to collect information on an entirely different subject, related to agriculture. Then we used that list as a nucleus, and by following up on that list twice, we have gotten right up to 75 percent. The important thing on that is that somebody visited them first and got their interest in it. That is a continual thing.

The returns on that special list are dropping down. Another piece of experience we have had in this same line, as you have suggested, is working with the county agents, with the Extension Service. In the State of Oklahoma about 4 or 5 years ago, they set up a series of area meetings right out in the county where crop reporters on the list were invited into the meeting, and county agents and others selected others whom they thought would be interested. These men sat down with the statistician and the county agent and the representative from the Extension Service and went into this whole matter of crop reporters as to how important it was.

Our returns there immediately built up, but this list gradually changed, and people dropped out. They gradually lose interest, and somebody has to go back and do that job again. It takes time to do it.

Mr. BELCHER. This is a sampling process to start with.

Mr. BURKHEAD. That is right.

Mr. BELCHER. What would be the difference, whether you would get 25,000 actual returns from 100,000 people, or whether you get 25,000 from 25,000 people—would you not be just as likely to be accurate one way as the other?

Mr. BURKHEAD. There is just one draw-back there. If you knew about the fellow that did not report——

Mr. HEIMBURGER. I want to ask that same question, but to phrase it a little differently. Do you think that the accuracy of your estimates would be improved if you could receive month after month your reports from substantially the same group of reporters? In other words, would the accuracy of your estimates be improved if you had the same group of people who were reporting regularly month after month?

Mr. BURKHEAD. On the regular monthly reports, yes. In other words, you are always safe the way we sample to have more returns, that is, the more returns you have, the more accurate, I think, your indications are. If that was not true, there would be no reason for us to continuously try to build up these lists.

Mr. SMITH. I think the general theory is that identical returns, which means reports from the same person, are supposed to increase accuracy. Roughly, 100 identical reports should be equal to about 400 reports from different individuals in increasing change. I do not know that our experience entirely bears that out, because you begin to get some selectivity in that sort of a thing, too.

Mr. HEIMBURGER. There are two things that have occurred to me while going over this data about your reporter list. I wonder if you have ever conducted a public appeal for reporters, crop reporters, in

order to try to find people who are just eager beavers in that respect, and who would like to get on the roll and be a crop reporter?

It seems to me that if you could do that in a county through the county papers and through various other media of publicity, and then could give them something to make them feel important, maybe a little thing to tack on their mail box which would say, "U. S. D. A. Crop Reporter," it would help.

Mr. BURKHEAD. I do not know about that.

Mr. HEIMBURGER. People like to be recognized for these volunteer things that they do, do not make any mistake about that.

Mr. BURKHEAD. I realize that.

Mr. NEWELL. I think that some of them do, that is true. The meeting in Kansas was a good illustration of what you are saying. That was the first meeting I attended, just like that. The State department of agriculture put it on. They must have had around 125 reporters from all over the State.

That is not a very large percentage of them, but they were scattered, from all communities. The State department of agriculture put on the ceremony, and presented them this certificate. I got up and handed out the diplomas. I got back to our State office a day later and the lady there said, "Look what I have got, two applications of farmers to become crop reporters."

I do not know whether it was related to it, but it was very significant that this had been advertised over the State. I do think there is a lot to this contact and building up their ego or building up their esprit de corps.

The meeting did get into some very interesting discussions of the experiences of crop reporters over periods of from 2 to 47 years. All of the older ones were discussing with the younger ones what they did and how they interviewed and looked around the neighborhood.

Those sort of things are always helpful. They help a lot, I think, to build up returns. It comes back to what Mr. Wells said and what I said a few minutes ago, that there is a lot to be said for this contract and personal relation deal that will help to build this up, I believe.

Mr. HEIMBURGER. I think so, too.

I, certainly, do not know anything about statistics, but I think I do know a little bit about public relations, particularly about working with volunteer groups. It is a science in itself.

It may not be as exact a science as statistics, but it is a science. I am not asking this question facetiously. Do you have a good promoter or public relations man who works with your Bureau and tries to devise these things, that is, helps to devise them in such a way that they will secure the fullest participation?

Mr. WELLS. The way you frame the question, the answer is "No," sir.

Mr. HEIMBURGER. I think that is unfortunate. I think it would be helpful to you.

Mr. WELLS. We have some statisticians who try to do this. We do not have a public relations man.

We have from time to time tried to simplify and improve our materials. For example, the State statistician in Mississippi at the present time is experimenting with some simplified questionnaires. They use print that you can read without your glasses, with simpler questions than on these schedules here, to see what returns he gets.

There has been quite a bit of work put in, in the crop reporting service, on the way you ask questions. We all know that psychologically you can ask questions in such a way as to get almost the answer you want.

One of the problems the Crop Reporting Board is up against all of the time is how to ask questions to get the true answer, rather than have the question influence the answer.

We do not have a public relations man who devotes himself to the general question as to how to make this more appealing. The statisticians are simply working with the people in the State and a few people in Washington trying to calculate, while they carry on their regular statistical duties, how they can make this more attractive.

Mr. NEWELL. I might just add one thing.

Last year I went to South Carolina to Farmer's Week. We had three sessions with crop reporters. Incidentally, we have a request to put on the same sort of program at Cornell.

A farmer's week is a time when a lot of farmers are in, when you can get them into a meeting, it is an opportunity to explain to them what the crop reporting service is, why it is important, and so on, and gain their interest.

There again it takes quite a little time. I mean, you have to put in quite a lot of time in building up a meeting, if you keep a lot of farmers interested. If you do not have anything for them, they walk out on you. I was a county agent, and I know. It does take some thought and time to build up a meeting of that sort. I am going to be interested to see if it does improve our relationship.

Mr. SMITH. There has been considerable work done in cooperation with the farm papers, and so forth, along the line that you are mentioning, but it has not been concentrated down to the county level. It has been more or less a broadcast shot but as a result, whenever one of those articles comes out, we usually get some men coming in and saying, "I would like to be a crop reporter."

Mr. HEIMBURGER. I think one of your big jobs in getting reliable crop reporters is to make these fellows feel important. I do not want to take any more time on that, because I want to ask one other question.

Have you tried supplementing your crop reports with reports obtained by telephone from anybody in the county? And why would it not be possible for some person in the county agent's office, or the PMA office, or any other reliable person to take a list of farmers that you wanted to get reports from, select the list any way you want to, and contact them by telephone?

Over the course of a couple of days you could contact most of them on the telephone and there would be no doubt about getting the answer.

Mr. NEWELL. We have used the telephone on some inquiries to some extent, but, of course, there again you get into quite a telephone bill when you start doing that.

Mr. HEIMBURGER. Not in those counties where they have a local exchange that you can use. I do not mean to contact them from the State headquarters.

Mr. BURKHEAD. They do that on the ginners, they use the telephone.

Mr. NEWELL. There is a possibility.

Mr. HEIMBURGER. Have you ever tried it on a farm survey?

Mr. BURKHEAD. I will give you a little example. Over in Maryland, when I was the State statistician out there—we have vegetable crops, as you know—I had a little list on the Eastern Shore of Maryland of, probably, six or eight fellows, and I used to call those gentlemen, and made arrangements with them. "Yes, I will report, I will be available any time you ask me."

Well, that lasted all right for a short time. Then I would call the fellows and they would not be at home. I could not wait on the report. My report had to go to Washington.

There is some effect that you can obtain by that method. It should be tried, and is tried to the limit that we can go, but if you depend on the telephone, we could not get enough farm samples.

We can obtain information by telephone from points where the crop is processed, for what we call a crop check. For instance, on rice we call half a dozen millers in Arkansas or Mississippi. You produce some rice down there, Mr. Chairman. You can probably get all of the information you want from three or four fellows in Mississippi by telephone, and we do it.

Mr. ABERNETHY. Your crop there, of course, is produced in isolated areas.

Mr. BURKHEAD. But to call up the farmers is hardly worth the money and the effort and the time to do it.

Mr. ABERNETHY. Maybe we have spent too much time on this. It has been interesting.

You may want to finish your statement before we adjourn.

Mr. BURKHEAD. Each indication from farmers and from ginners is considered separately by each board member and used by him in arriving at a final recommended estimate for each State.

For November, we again use the acreages that were published in September to convert farmers' reports into indicated bales. Again we have condition and yield per acre prospects reported by growers, as well as ginners' information reported to date.

We use the same general procedure in November that we use in October. We ask, "How many bales do you expect to gin," and the further along the season goes the more actual bales they have already ginned.

For the December report, both acreage and yield per acre prospects are resurveyed. Acreage information is available from about three sources: (*a*) what is known as the rural carrier acreage card; (*b*) the acreage and production card, which is a census type of questionnaire asking for total acreage harvested, and total bales produced; and (*c*) the regular cotton inquiry.

Various indications of acreage are worked, as we will go into later, analyzed by means of charts, and acreage determined from each indication. Furthermore, as of December 1, another estimate of abandonment of acreage since July 1 is prepared. Acreage for harvest is estimated, with the acreage in cultivation July 1 being derived. That is, the acreage for harvest is divided by the complement of the percentage abandonment to derive an acreage in cultivation July 1.

If the abandonment is 5 percent, why, we take 5 from 100 which leaves us 95; divide that into the harvested acreage and multiply by 100. This procedure relates the harvested average back to a July 1 base.

For production, we again have indications from growers on yield per acre prospects. We do not ask "condition" in December.

We also have ginners' data which relate to the season through December 1. We have 90 percent or more of the crop ginned by December 1.

The ginners' information is processed, as well as that from growers, generally in the same manner as is done for similar data for earlier months in the season. That is, to allow for whether or not that series over the years has been too high or too low in relation to the actual facts.

That about winds up the general program of our estimating procedures for an individual season. We have not, of course, gone into the details here which will take quite a bit of time, if you want to go into them in detail.

Mr. ABERNETHY. I think we want to do that, but I do not think this would be a good hour to start.

We will come back tomorrow morning. We will recess until 10 o'clock in the morning.

(Whereupon, the hearing in the subcommittee recessed until 10 a. m., Tuesday, January 29, 1952.)

COTTON CROP ESTIMATES

TUESDAY, JANUARY 29, 1952

HOUSE OF REPRESENTATIVES,
SPECIAL SUBCOMMITTEE OF COMMITTEE ON AGRICULTURE,
Washington, D. C.

EXECUTIVE SESSION

The subcommittee met, pursuant to adjournment, at 10:10 a. m., in room 1310, New House Office Building, Hon. Thomas G. Abernethy presiding.

Present: Representatives Abernethy (presiding), McMillan, and Thompson.

Also present: John J. Heimburger, counsel, Committee on Agriculture; S. R. Newell, Assistant Chief, Bureau of Agricultural Economics, and Chairman, Crop Reporting Board; R. K. Smith, Vice Chairman, Crop Reporting Board; C. E. Burkhead, Head, Field Crops Division; J. J. Morgan, Fiber Crop Section; Ella Sue Minor, statistician, Fiber Crop Section.

Mr. ABERNETHY. The committee will come to order.

Mr. Heimburger has some questions that he would like to ask.

Mr. HEIMBURGER. Mr. Chairman, yesterday we had quite a discussion of the precentage of returns from mailings to crop reporters. There were various percentage returns, some as high as 70 percent, which were mentioned. Just to straighten ourselves out on it and to be sure that we understand that we are talking about the same thing, I think we ought to indicate pretty clearly what the return was from the questionnaires which were sent out in connection with last year's cotton reports.

I do not find that table in my book.

Mr. SMITH. It is just before the July tab.

Mr. HEIMBURGER. Just to get this table straight so that we understand it, which of these surveys were sent to your regular crop reporters?

Mr. BURKHEAD. There is a correction to be made in your table.

In the August report it is 2–A. You should have 32,854 mailed out.

Mr. ABERNETHY. Does that change the figure "31,360"?

Mr. BURKHEAD. Yes, sir, it does.

Mr. ABERNETHY. It is what?

Mr. BURKHEAD. 32,854.

And the number of schedules tabulated, 7,268, instead of 6,861.

You asked which ones of these inquiries went to our regular cotton reporters.

Mr. HEIMBURGER. Your regular crop reporters, yes.

Mr. BURKHEAD. The regular crop reporters or the cotton reporters?

Mr. HEIMBURGER. Is there a difference?

Mr. BURKHEAD. Yes, there is. So for this discussion we will call the list our regular cotton reporters.

Mr. HEIMBURGER. All right.

Mr. ABERNETHY. Let me get that clear in my mind before you go any further on that.

Do you have both the regular crop reporter and the cotton reporter in, let us say, just strictly a cotton State? I realize that such a State does produce some crops besides cotton. Take my State, which is predominantly a cotton State. Do you have both?

Mr. BURKHEAD. We used to have in Mississippi two lists; one list was sent this long green scehdule—a list we call the general crop reporter list. They report on many items during the season. You might like to take a look at one.

Mr. ABERNETHY. I will not look at it for the time being. I want to get that distinction in my mind. You need not go into too much detail on that.

Mr. BURKHEAD. Since in Mississippi and many other cotton States the average farmer grows some cotton, year before last we combined what we call our general crop reporter list and our cotton list into one list. We think that is an improvement. So in Mississippi, for all practical purposes, the general crop reporter and the cotton reporter lists are identical.

Mr. ABERNETHY. But they make crop reports as to all crops?

Mr. BURKHEAD. As to all crops, yes.

Mr. HEIMBURGER. Some of the other States, besides Mississippi, still have the separate lists?

Mr. BURKHEAD. The separate list for the general crop reporters, yes.

Mr. HEIMBURGER. And also the cotton reporters?

Mr. BURKHEAD. Yes.

I might say that the idea of combining cotton and the general reporters in several States is still in an experimental stage, but it seems to be working so far.

You asked which ones get the July cotton schedule.

Mr. HEIMBURGER. The July cotton schedule, yes.

Mr. BURKHEAD. The same list, in general, gets the August cotton schedule, the September cotton schedule, the October cotton schedule, the November cotton schedule (5–A in your ring binder), the December cotton schedule (6–A and 7–A), and the end-of-the-season schedule.

Mr. HEIMBURGER. Let us run a quick, rough tabulation and see what the percentage of response was to those questionnaires.

Mr. BURKHEAD. Do you want the total combined?

Mr. HEIMBURGER. Yes, a combined total; a rough percentage of your experience last year in hearing from these crop reporters on cotton.

Mr. NEWELL. Do you want those percentages? Mr. Smith is running them up on the slide rule here.

Mr. HEIMBURGER. Let us get them in the record. I make it 22 percent, roughly.

Mr. SMITH. 22.3 in August.

Mr. HEIMBURGER. I averaged the whole thing up roughly.

Mr. BURKHEAD. Let us do it right while we are at it.

Mr. SMITH. The July figure is about 16.5 percent; August is 22.3. These may be off a tenth of 1 percent, one way or the other. September is 24 percent; October 24.7 percent; November 26.6; December is 17.5; and May, that is, 7–A, was 23.9.

Except for the two big acreage surveys you run some 22 to 25 percent.

Mr. ABERNETHY. Give me October and September again.

Mr. SMITH. October is 24.7, and September 24.0.

Mr. HEIMBURGER. I think Mr. Morgan was about to give us an over-all percentage there.

Mr. MORGAN. 20 percent—it is 20.2 percent, to be exact.

Mr. BURKHEAD. We want to make one statement about the July cotton schedule and also the December schedule. In those 2 months you will note that we mailed out between 66,000 and 71,000 reports, compared with roughly 28,000 to 29,000 during the months August through November.

By rights the average return should be figured only on the regular cotton reporters—for the months August through November plus May—leaving out July and December for this reason: In those months you will remember we have acreage items on the questionnaire and we use a reserve list to which we sent additional schedules, because it takes a much larger sample to estimate acreage than it does to obtain condition and yield.

That is the reason for the low return, because those extra reporters are used less often. They are used probably three times a year, while the regular cotton reporters are used monthly from August right on through the season.

Mr. ABERNETHY. May I bring up something else now? Where in this file, if it is in here, is there a tabulation of the estimated acreage abandoned in each State? That is, of your last report.

Mr. BURKHEAD. The actual abandoned acreage?

Mr. ABERNETHY. Yes, sir. I do not know whether it is actual or not.

Mr. BURKHEAD. I have a table here which I made up for just a few of us, and I have a copy which I will give you.

Mr. ABERNETHY. It is not in here, though?

Mr. BURKHEAD. No, sir.

Mr. ABERNETHY. I would like to have a copy of that.

Mr. BURKHEAD. I call it the 1951 cotton story.

You can get from this table practically anything you want in the way of acreage changes.

Mr. ABERNETHY. Let me take a look at it for a moment, and then I want to ask you some questions about it.

This does not show the acreage abandoned, does it, Mr. Burkhead?

Mr. BURKHEAD. Not the actual acreage, Mr. Chairman.

Mr. ABERNETHY. Does this show the percentages abandoned?

Mr. BURKHEAD. Yes, sir; it shows the percentage abandoned to September 1.

Mr. ABERNETHY. What column is that?

Mr. BURKHEAD. It is about three-fourths of the way to the right side.

Mr. ABERNETHY. Under the subject Acreage for Harvest?

Mr. BURKHEAD. Yes, sir. The published report for December does not show the full abandonment estimated for the United States.

Mr. HEIMBURGER. On the printed table the abandoned acreage is the difference between the column headed "December 1" and the column headed "December 1 revision of July figures," is it not?

Mr. BURKHEAD. That would be the acreage abandoned.

Mr. ABERNETHY. Let me see if I can develop what I have in my mind without referring to the tables, and let you refer to them.

I have before me a table entitled, "Cotton Acreage and Production, 1951, by States, With Comparisons." Mr. Heimburger had this made up.

According to this table, your December 1 report indicated that you made no error whatsoever in the estimate made on August 1. In other words, your December 1 report and your August 1 report coincide, that is, for Missouri; is that correct?

Mr. BURKHEAD. On bales?

Mr. ABERNETHY. Yes, sir.

Mr. BURKHEAD. December 1 and August 1, absolutely right.

Mr. ABERNETHY. I have heard a considerable amount of discussion and read in the papers about all of this freeze that took place out in Missouri. I have even heard one member of this committee make reference to a freeze out in Missouri.

Now, certainly, the freeze did not come as early as August.

Is there any particular reason in your mind as to why you happened to be so accurate on the Missouri report, whereas you were not nearly so accurate on the reports from other States?

How do you account for that? How do you account for your accuracy in Missouri?

Mr. BURKHEAD. Well, Mr. Chairman, first of all, cotton in Missouri is produced primarily in about a dozen counties in the southeastern corner of the State. You can round up a crop better when it is in a small area—you can observe it more thoroughly. I mean by that that you can cover it more thoroughly, conditions are generally more uniform—what we call a homogeneous area.

Mr. ABERNETHY. I think that is sufficient. I think that answers that question, if you will pardon me for interrupting you.

Let us go back to another column on this table.

How much was your acreage off, according to your figures? According to our figures it is 1.8 percent-plus. So there was no abandonment.

Mr. HEIMBURGER. Just to supply the figures, I think I can answer that question, that on July 1 the acreage in Missouri was estimated as 560,000, and when the July 1 figure was revised on December 1 they increased that to 570,000. In other words, it went up 10,000 acres when they made the revised estimate in December.

Mr. BURKHEAD. We have not made much change in Missouri all during the season.

Mr. ABERNETHY. That puts Missouri completely out of this picture then, so far as weather and abandonment, and so on, are concerned. Do you agree with me on that?

Mr. BURKHEAD. Yes, sir, I do.

Mr. SMITH. I would like to make a statement there. Actually, the record shows that the forecasts of production increased between September and October. Weather conditions were such that you got an improvement in production prospects. And then you had your decline from November to December, which is the result of your freeze.

So you have two factors there essentially offsetting each other.

Mr. HEIMBURGER. May I interpolate a question here? It seems rather curious that the production estimate in Missouri should have remained so constant when your figures show an abandonment of 97,000 acres in Missouri from July 1 to September 1; in spite of that reduction of almost 12 percent in acreage, your production estimate remained constant.

Mr. BURKHEAD. We did not remain too constant, Mr. Heimburger, in that we increased the production forecast 10,000 bales in October and reduced it 10,000 bales in December.

Mr. HEIMBURGER. Yes; that is a relatively minor change, however.

Mr. BURKHEAD. It is a small change.

Mr. HEIMBURGER. You took out 12 percent of the acreage and added 3 percent to your production estimate at the same time.

Mr. MORGAN. Conditions there were such that we could estimate the abandonment for the season on the 1st of September with a pretty good degree of accuracy.

Mr. ABERNETHY. I want to go to South Carolina. That is an important cotton-producing State.

You wound up the year with very little change in your original estimate there. Is that not correct?

Mr. BURKHEAD. Yes, sir; we increased the September forecast 20,000 bales over August—made no change in October from September—decreased the November forecast 10,000 bales from October—and made a further decrease of 10,000 bales in December compared with November.

So we wound up the season with 860,000 bales, the same as we had in August.

Mr. ABERNETHY. In Georgia, you were very close there.

Mr. BURKHEAD. Yes, sir.

Mr. ABERNETHY. The beginning of August as compared with December.

Mr. BURKHEAD. We were 15,000 bales above the August forecast when we finally wound up the season in Georgia.

Mr. ABERNETHY. All right, sir.

In California, which is now, I think, the second largest, you had a very good report out there.

Mr. BURKHEAD. Yes, sir.

Mr. ABERNETHY. Is there a plus or minus there?

Mr. BURKHEAD. We wound up 20,000 bales higher.

Mr. ABERNETHY. 20,000 bales above the August forecast?

Mr. BURKHEAD. Yes.

Mr. ABERNETHY. There are three important States out of the way.

Mr. BURKHEAD. I would like to point out that California cotton is mostly irrigated and more or less controlled production, which you do not have in some of the States like Mississippi, where it is 500 miles from one end of the State to the other.

Mr. ABERNETHY. It appears that the bulk of your difficulty, or, let us say our difficulty because we are all trying to work together here now, appeared in the State of Arkansas.

Mr. BURKHEAD. That is right.

Mr. ABERNETHY. Where you wound up 16-plus percent under your August estimate; in Oklahoma, where you wound up 33.8 percent

under your August estimate; and Texas, where you wound up approximately 18 percent under your August estimate.

Mr. BURKHEAD. Yes, or 22 percent higher in August than in December.

Mr. NEWELL. The same thing.

Mr. HEIMBURGER. Your estimate was reduced 16.3 percent in December. We have the percentage of reduction.

Mr. ABERNETHY. You were 20 percent too high in Arkansas?

Mr. BURKHEAD. Yes, sir.

Mr. ABERNETHY. What about Texas?

Mr. BURKHEAD. We were 22 percent high in August.

Mr. ABERNETHY. And what about Oklahoma?

Mr. BURKHEAD. Fifty-one percent above or too high.

Mr. ABERNETHY. What about Tennessee?

Mr. BURKHEAD. Tennessee, 9 percent above. Alabama, 7 percent.

And, Mr. Chairman, if you will pardon me just a minute, here is a table that I would like to present to you. I think you can follow me easier than you have with the table you are using.

Mr. ABERNETHY. All right, let us take Oklahoma. You were 51 percent in error there.

What was your original acreage estimate for Oklahoma?

Mr. BURKHEAD. 1,675,000.

Mr. ABERNETHY. And your final acreage estimate?

Mr. BURKHEAD. In December, our estimate of the acreage in cultivation, July 1 was 1,551,000 acres.

Mr. ABERNETHY. Certainly that difference in acreage cannot make that much difference in production.

What happened in Oklahoma?

Mr. BURKHEAD. Something has happened in Oklahoma which has not happened in other States so far as we know now. According to gin records, Oklahoma has ginned more cotton, a little bit more, than we estimated in December, Mr. Chairman, so we are low.

Mr. ABERNETHY. You are what?

Mr. BURKHEAD. I say that Oklahoma has ginned more cotton to date than we have estimated, so that will be one State where we undershot the mark in December and will have to revise upward.

Mr. HEIMBURGER. Just in order to give us an idea of exactly what happened there in estimating Oklahoma's production, Mr. Burkhead, could you tell us the anticipated yield per acre you used as the factor in each of those months in making your estimate?

Mr. BURKHEAD. You mean the weighted par yield?

Mr. HEIMBURGER. I do not know your name for it, but after you decided how many acres there were you must have multiplied that figure by some anticipated yield to get the production.

Mr. BURKHEAD. Yes, sir. We will have to refer to our August cotton report which is in your book. It is under the August tab.

You will find in Oklahoma that the indicated yield for Oklahoma was 206 pounds as of August 1, 1951. As I say, we ended up the season a little low in Oklahoma.

Mr. ABERNETHY. That is an unusually high yield for Oklahoma.

Mr. HEIMBURGER. How about putting in the other months as we go along. It was 206 pounds for Oklahoma in August.

Mr. BURKHEAD. Yes. In September we had 188 pounds.

Mr. HEIMBURGER. I have October here. It is 174. You were down in October.

Mr. SMITH. That is right.

Mr. BURKHEAD. And in November the indicated yield per acre in Oklahoma was 150 pounds and in December 149 pounds, Mr. Chairman.

Mr. HEIMBURGER. Right on that score, using your first figure of 206 pounds which you used in August, the 10-year average, 1940–49, was 173 pounds.

What factors were there in Oklahoma last July that led you to believe on August 1, that the average yield per acre would be up that much?

Mr. BURKHEAD. The yield per acre, as we publish it, is a derived yield per acre, and based on estimated production, divided by acres for harvest.

As the record shows, we were high on acres in Oklahoma, that is, August, compared with the final. In August we estimated 1,588,000 acres for harvest. We wound up in December with 1,450,000, or with quite a difference. That is acres for harvest. Do not get the July 1 acres mixed up with acres for harvest.

By virtue of the fact that our acres were high and, consequently, our production high, in August our yield derived at a fairly high level at that time.

Mr. HEIMBURGER. Do I understand that you do a reverse process on this in estimating the production of a State, that you get the acreage and then decide how much the probable production of that State is going to be and then divide the production by the estimated acreage to arrive at a yield per acre figure in your estimate.

Mr. BURKHEAD. We have not gotten into the details of how we work up the indications yet, which is kind of throwing us all for a loop now.

Mr. NEWELL. I think you need to get in the record the way you derived this yield from your chart, because, as a matter of fact, the yield is based on the condition reported by the reporters. And condition in that month ran high, for an indication of a high production, based on the report of the farmers on the condition at that time.

Mr. ABERNETHY. To clarify this situation, when you change your production figures, you then take that and relate it to your acreage figures as of July?

Mr. BURKHEAD. It might be July, Mr. Chairman, depending on the month you are talking about.

Mr. ABERNETHY. Yes. You scale your acreage figures up or down in relation to your production figures?

Mr. BURKHEAD. No.

Mr. ABERNETHY. In July you get an acreage figure.

Mr. BURKHEAD. In cultivation July 1.

Mr. ABERNETHY. In cultivation July 1.

Mr. BURKHEAD. Yes.

Mr. ABERNETHY. Then when December comes along and you find that your production reports are high or low, as related to your August report, did I now understand you to say that to a degree you related your acreage figures up or down?

Mr. BURKHEAD. Let us take a look at the acreage program.

On July 1, we estimate acres in cultivation.

In August, we take this item, less the 10-year average abandonment.

In September, we estimate abandonment and take it away from July 1 acres.

Mr. HEIMBURGER. The July 1 figure?

Mr. BURKHEAD. Yes.

Mr. NEWELL. That is a reported abandonment figure.

Mr. BURKHEAD. In October, we use the September estimate of acres for harvest.

In November, we again use the September acres for harvest.

In December, we resurvey the whole universe—resurvey acreage and production.

Mr. ABERNETHY. How many acreage reports do you get from the reporters themselves?

Mr. BURKHEAD. We get the July acreage.

Mr. ABERNETHY. And no more?

Mr. BURKHEAD. And the December acreage. And the estimated abandonment in September.

Mr. ABERNETHY. All right. You get a July acreage report, you get a December acreage report?

Mr. BURKHEAD. Yes, sir.

Mr. ABERNETHY. Then you make a December estimate of yield and if you find that that yield is high or low, as related to your August report, do you then change your acreage figures accordingly?

Mr. BURKHEAD. In December?

Mr. ABERNETHY. Yes, sir. What I am trying to find out is whether or not you relate your yield to your acreage estimates.

Mr. BURKHEAD. Yes, sir, we do.

Mr. ABERNETHY. Do you relate your acreage estimates to your yield?

Mr. BURKHEAD. Not necessarily, not directly, no, sir. Acreage is an independent estimate. Acreage times yield equals production.

One thing that is confusing us is that we have not gone into how we calculate the production index.

We do not read reported yield against the Board yield. We work the reported yield into an index in order to use a shortcut where you analyze two items, you might say, at one time.

Now just remember this, we estimate acreage independently, and we estimate production independently, in the system we use for cotton. We derive the yield per acre as a final step.

Why do we derive the yield? Because in the very beginning we tie together, to get an indication of production, acreage and yield and read it off a chart. So you automatically take into consideration your reported yield in reading your production off of your chart.

Mr. HEIMBURGER. Let me see if I can straighten this out in my own mind.

To say that you derive the yield you say this, that you take your acreage and apply to that a yield factor to give you production, and then you divide the acreage into your production in order to get the yield figure in pounds.

Mr. BURKHEAD. That is right. And then round it to the nearest tenth of a pound.

Mr. HEIMBURGER. But, essentially, your production then is acreage times yield?

Mr. BURKHEAD. Right.

Mr. HEIMBURGER. I did not see how you could get it any other way.

Mr. Burkhead. You cannot.

Mr. ABERNETHY. Let me get back to what I was trying to lead up to here. This forecasting business is something which the Department and all of us, let me say, endeavor to do in a scientific manner. That is the only way you can do it.

Mr. BURKHEAD. That is right.

Mr. ABERNETHY. Unless you have actual measurements.

Mr. BURKHEAD. That is right.

Mr. ABERNETHY. Do you not think that our scientific system is entirely wrong, or else it is tremendously lacking in reasonable accuracy when in one State, let us say Missouri, where you hit it right squarely on the head, and then in another State which produces a comparable amount of cotton, Oklahoma, you miss it by 51 percent? That is most alarming to me.

If this system works absolutely accurately over here in Missouri or in South Carolina, and in Oklahoma you miss it 51 percent, what is wrong with it?

There is something wrong, something definitely wrong with it.

Mr. BURKHEAD. Nothing wrong with the system, necessarily, Mr. Chairman.

In any statistical work you always have a margin of probable error.

Mr. ABERNETHY. I realize that, Mr. Burkhead, but I do not see how we could pass that off by saying we could expect a 51 percent margin of error.

Mr. BURKHEAD. I am not expecting that.

Mr. ABERNETHY. I should not say expecting, but turn up with it.

Mr. BURKHEAD. At the beginning of the season in Oklahoma we had pretty good conditions. Prospects were very bright. And then we had all kinds of weather conditions. You know what happened to the wheat crop out there.

We had rainy weather part of the season. We had much cotton washed out in the Southwest where much cotton is produced.

So conditions in Oklahoma went from bad to worse. Furthermore, we had early freezes in some of those areas. About everything that could happen to a cotton crop happened to it in the central belt in 1951.

Mr. ABERNETHY. When did those freezes happen?

Mr. BURKHEAD. About the 2d and 3d of November.

In Oklahoma you have one of the most variable States as far as weather is concerned.

Mr. THOMPSON. Do you have any idea how the Texas decrease took place—was that up in north Texas where they also got a freeze?

Mr. BURKHEAD. Part of it did, Mr. Thompson. The major part was in northwest Texas, and east of Dallas, over in the blackland belt. Cotton almost dried up there early in the season.

Mr. ABERNETHY. You mentioned the freeze in Oklahoma.

The November report indicated a production of 500,000 bales, did it not?

Mr. NEWELL. That is right.

Mr. ABERNETHY. And the freeze took place in the early part of November, you say.

Mr. BURKHEAD. That is, November 2 and 3,

Mr. ABERNETHY. And the production then was reduced in December by 50,000 bales?

Mr. BURKHEAD. Right, sir.

Mr. ABERNETHY. Your production in November was reduced.

Mr. BURKHEAD. By 80,000 bales.

Mr. ABERNETHY. Wait a minute. Your production estimate in November was reduced 125,000 bales under September. How do you account for that?

Mr. BURKHEAD. Between what months?

Mr. ABERNETHY. September 1 report was 625,000.

Mr. BURKHEAD. We account for that because of drought and bollworm damage—a continuous build-up of the effects of all of the bad weather on the cotton crop, late cotton especially.

Mr. ABERNETHY. I had thought that the weather happened in November, that is, the freeze.

Mr. BURKHEAD. A continuous build-up of all of these effects which were not apparent before that time.

Mr. NEWELL. I think we ought to say this, that you have put your finger on an area where the greatest difficulty occurred throughout the season, that northern belt where you had drought followed by floods and more drought, and then the November freeze occurred in that very area causing more difficulty.

In some of the other parts of the belt we did not have that.

You cited South Carolina. Your conditions were more uniform, as I recall it, were they not?

Mr. BURKHEAD. That is right.

Mr. NEWELL. You did not have that difficulty.

It is all tied up with a continuation of the unusual condition through the whole season in that northern belt. You can almost draw a circle around it in Oklahoma, Texas, Arkansas, northern Mississippi and some of the northern parts of the belt.

Mr. BURKHEAD. That is where the havoc occurred.

Mr. ABERNETHY. Let me go to Texas next. You have a 22 percent minus error in Texas. Tell us how you account for that.

Mr. BURKHEAD. We were high on acreage.

Mr. ABERNETHY. That is not a normal thing?

Mr. BURKHEAD. No, sir. I assure you that it is not.

Mr. ABERNETHY. How did you happen to miss the acreage out there? Whose responsibility was it? Who gave you the wrong impression, the wrong information, and who calculated the figures wrong, if there was any miscalculation?

Mr. BURKHEAD. I do not think that anybody intentionally gave us any wrong figures.

Mr. ABERNETHY. I did not mean to say intentionally.

Mr. BURKHEAD. Where did the bias come in?

Mr. ABERNETHY. Yes, sir.

Mr. BURKHEAD. First of all, Texas increased cotton acreage a tremendous amount this year, 86 percent, in 1951, compared with 1950.

They had just had, of course, acreage allotments in 1950, and that was fresh in the minds of the growers.

Let us be frank with each other in saying that we do realize that bias in the 1951 data was probably greater because of those back events, primarily the acreage programs, than for many years.

Mr. ABERNETHY. Then the comment I made yesterday did enter into this?

Mr. BURKHEAD. I told you that it did have an effect, and I say it here.

Mr. ABERNETHY. Let us pursue that for a second. You say in Texas that, in your opinion, the reporters in estimating their acreage, if there was any bias, the bias was on the upper side?

Mr. BURKHEAD. Yes.

Mr. ABERNETHY. That in signing these latter reports that they mailed in, they made certain that they did not underestimate it; if anything, they overestimated.

What other States was that applicable to?

Mr. BURKHEAD. You mean the overestimating of acreage?

Mr. ABERNETHY. I mean where you think, probably.

Mr. BURKHEAD. I think in part it was true in Oklahoma, possibly some of it in Mississippi, some of it in Arkansas, not so much elsewhere, I would say.

Let us take a look at what happens in Texas. You have cotton going in the ground in Texas right now, or a little later, along in February. You have cotton going in the ground in Texas after mid-June, almost up to July 1. That is a 5-month planting season.

In Texas in 1951 they had the first drought in the blackland area which, in the early season, the growers thought would mean they were going to lose it all. It was just drying open, producing very little cotton.

And then, of course, one of the biggest acreage increases occurred in northwest Texas—over near Lubbock, Amarillio, that general territory, where one county will produce hundreds of thouasnds of acres of cotton.

Well, then dry weather hit those areas later on. And later in the season you had your freezes.

And remember this, that much of that cotton was late, all through this belt that I just told you about, Mr. Chairman, the latest for a number of years, and it was in doubt right up to November 1, and even today there is still some doubt about what some of that late cotton is going to produce. And Texas had a lot of it.

So all of those combinations of factors, as far as the prospects on August 1 are concerned, entered into the final picture.

I feel very sure that had conditions remained normal from there on out—anything like normal—we would have been very close to the 5 million bales of cotton we estimated on August 1. We held that figure for 2 months. The growers thought it was going to come through.

Mr. ABERNETHY. It is difficult for me to reconcile that when you have shown a reduction in acreage in Texas of about 700,000 acres.

Mr. BURKHEAD. Yes; of course, yield-per-acre prospects do not necessarily hinge on the acreage. You can still lose a lot of acreage and come through with that which you do harvest and make a tremendous output, of course.

Mr. ABERNETHY. Their average per acre yield out there is about two hundred and thirty-some pounds; is it not?

Mr. BURKHEAD. I doubt if it is that much. We will check that. It is 181 pounds; Oklahoma is 173.

Mr. ABERNETHY. With that low yield and a reduction in acreage of 700,000 acres, Mr. Burkhead, I still do not see how you could have been very close to that 5,000,000-bale figure.

Mr. BURKHEAD. You can reduce the 5,000,000-bale figure by roughly the percentage change we made in the acreage, Mr. Chairman.

Mr. ABERNETHY. The fact remains that half of the trouble throughout the Cotton Belt took place in Texas last year.

Mr. BURKHEAD. Right.

Mr. ABERNETHY. Approximately one-half, a little less than half, about 900,000 bales.

Mr. BURKHEAD. Yes; 900,000 bales is exactly right.

Mr. ABERNETHY. How do your figures for this year relate to the figures, let us say, for 1949—what was your error in 1949? You cannot give us the figures for 1950, because we had acreage allotments that year.

Mr. MORGAN. In 1949 our first production forecasts in Texas were for 4,400,000 bales. We would up with an estimate for the season, I believe, of about 6,100,000 bales.

Mr. ABERNETHY. So you were under that year.

Mr. MORGAN. We were way under that year. That was the first year in our experience that all areas of Texas had come through with a record crop.

Ordinarily in Texas we get some areas going up and others going down during the season.

Mr. ABERNETHY. You had a very high yield in 1949?

Mr. MORGAN. In 1948 we were pretty well on an even keel for the season.

Mr. ABERNETHY. What I am trying to find out is this, in examining your reports for previous years—I am sure you have endeavored to do that in an effort to determine whether this is a going thing in each State each year—have you found that this error has been running year in and year out in Texas as it appeared this year?

Mr. BURKHEAD. The answer is "No."

Mr. ABERNETHY. It has not been a general thing?

Mr. BURKHEAD. We have not had many years like 1951, Mr. Chairman, as you know.

Mr. THOMPSON. You have a particular situation in Texas.

Mr. ABERNETHY. I am not being critical of Texas.

Mr. THOMPSON. It is very difficult to make any yardstick fit the entire State.

Mr. BURKHEAD. Right.

Mr. THOMPSON. I notice that your national average increase or decrease of acreage this year was minus 5.1, and that Texas was minus 4.9, which does not seem to be out of line.

So it was strictly a production error or an error in estimating.

Mr. BURKHEAD. Or a change in the weather conditions from early to late.

Mr. THOMPSON. In my own district, which is a 15-county section down on the coast, we had a tremendous bumper crop, but we got the necessary rain at exactly the right times.

Mr. MORGAN. You had a minimum of rain, also. It was drier than usual in that south Texas area this year.

Mr. THOMPSON. That is correct, but we got the rain at the time. The drought came at the right time, and the rain came at the right time.

Mr. ABERNETHY. Where did this bad-weather situation apply in Texas, then?

Mr. THOMPSON. Almost every place else.

Mr. BURKHEAD. He has answered it.

Mr. ABERNETHY. What months?

Mr. BURKHEAD. All during the season, from early May until even now.

Mr. THOMPSON. But the production in that district of mine will throw your average for Texas all out of gear, because it is so big.

Mr. BURKHEAD. Yes.

Mr. ABERNETHY. Mr. Heimburger wants to touch on this.

Mr. HEIMBURGER. Mr. Burkhead, this discussion of Texas weather gets back to that question that I asked the other day when Mr. Wells was up here about the apparent lag between weather and the indication of it in your figures?

Mr. BURKHEAD. That is right.

Mr. HEIMBURGER. I will admit that it concerns me very much.

I have spent a lot of time since then poring over these weather reports, and, frankly, it seems to me that there is some kind of a lag in your process that could and should be improved.

Texas is a good example of it. And if the chairman will allow me a little time, I would like to develop that.

Mr. ABERNETHY. Yes; go ahead.

Mr. HEIMBURGER. Your acreage estimate in Texas was decreased 4 percent between July 1 and September 1—October 1, for that matter, because on October 1 you used the September 1 acreage.

Mr. BURKHEAD. Yes.

Mr. HEIMBURGER. Your acreage decreased 4 percent between July 1 and October 1. During that same period your estimate of production for Texas decreased precisely 4 percent, also. In other words, on the acreage that was not abandoned you still anticipated as much yield per acre in Texas on October 1 as you did on July 1. Of course, August 1 was when your first production estimate was made.

The thing that bothers me is this, it appears to me from a perusal of these Weather Bureau weather and crop bulletins that most of the bad weather in Texas took place before October 1. I want to read these as to Texas, just to see if we cannot get this thing out where we can discuss it in the future without having to refer to these documents. I would like to read here from the Weekly Weather and Crop Bulletin of the United States Department of Commerce, Weather Bureau, the first one for the week ending July 3, and then for each week thereafter.

Mr. BURKHEAD. You are starting too late.

Mr. HEIMBURGER. I did not start too late for my purpose, because what I want to show is this, that there must have been a substantial deterioration of the cotton prospects in Texas prior to October 1.

Mr. BURKHEAD. That is right.

Mr. HEIMBURGER. If there is no machinery in your reporting system for learning from your reporters about a decrease in prospects as contrasted with a present deterioration of the crop, then it seems to me that somewhere along the line the machinery should be changed around.

Mr. BURKHEAD. We reduced it.

Mr. HEIMBURGER. Only in proportion to the reduction in acreage. You did not reduce the yield estimate at all for those 3 months.

Let me read this weather report just as it applies to Texas. For the week ending July 3:

Cotton good to excellent progress, except some deterioration in extreme south.

Mr. BURKHEAD. Is that all it said?

Mr. HEIMBURGER. I am merely reading from the Texas report in this Weekly Weather and Crop Bulletin the sentence that refers to cotton so as not to clutter up the record.

The week of July 10:

Soils dry in southern two-thirds, with feed crops and cotton showing some deterioration, but cotton in general made good growth and is fruiting rapidly in central, east, and upper coast. Active picking in lower Rio Grande Valley, bolls opening in south, some prematurely.

Week of July 17:

Cotton deteriorated in central and south where growth retarded, some premature opening. Cotton good growth in north. Heavy fruiting in Red River area, blooming in high plains, insect-control measures effective.

July 24:

Cotton deteriorated while opening prematurely in central and south, harvesting active in lower Rio Grande Valley and in coastal belt where prospects are poor. In northern half cotton good progress, but more moisture needed.

Week ending July 31:

Cotton prospects continue to lower, except in north and on high plains where crop blooming and fruiting rapidly. Harvest well under way in lower Rio Grande Valley and coastal belt, starting in south central and southwest.

Week ending August 7:

Harvest of prematurely opened cotton under way in central, east and south All dry land cotton in urgent need of rain, although acreage in south too far along to be benefited.

Week ending August 14:

Nonirrigated cotton suffered in all sections. Picking prematurely open cotton extended north to Red River. Gins operating at full capacity in east and south. Fruiting and development of cotton checked. Much opening prematurely.

Week ending August 21:

Cotton picking and pulling active in southern two thirds; rapid and premature opening extended to Red River.

Week ending August 28:

Cotton picking and pulling gaining momentum through central and north Cotton improved in northwest, showing slight deterioration elsewhere.

Mr. MORGAN. What was the date of that, please?

Mr. HEIMBURGER. August 28.

Week ending September 4:

Cotton poor; progress except in few favored spots in northwest.

Week ending September 11:

Harvest of cotton, sorghums, corn, rice, and peanuts moving rapidly as hot, dry weather persisted first of week.

Week ending September 18:

Cotton grade lowered and harvest interrupted in rain area.

Week ending September 25:

Cotton in northwest good progress. Harvest continued active in central and east and was about completed in coastal belt and south before rains.

Week ending October 2:

Cotton harvest progressed in central and north, but only on small scale in high plains where some just opening.

It seems to me, Mr. Burkhead, that those weekly reports show quite clearly that the weather which damaged Texas cotton was weather during the months of July and August and, as you say, even perhaps earlier. I do not have the records going back any further. And yet that does not show up in your estimates, apparently, until November.

Mr. MORGAN. There is one thing there that I think should be pointed out.

As you recall from those statements on the weather through September, conditions were still improving and looked very favorable in the northwest.

So you have conditions improving with prospects for a larger crop in that area of the State, while you have deterioration in other areas of the State. Therefore, you see in our published figure only the compromise of the two.

Mr. ABERNETHY. Where did they make the best crop, in what section of the State?

Mr. MORGAN. The yield was comparatively low, I think, in all areas, even in the South Texas area, as they did not have an average yield there.

Mr. THOMPSON. Per acre?

Mr. MORGAN. Yes.

Mr. THOMPSON. It was way above normal in almost every county that I have, with the exception of perhaps one and part of another. The yield ran more than normal by a considerable amount.

I think that is what they identify as the coastal belt.

Mr. MORGAN. I was aware of quite a severe drought in that area with the prospects not turning out as much as at first.

Mr. THOMPSON. That is correct, but the results were excellent. They all came at once.

Mr. MORGAN. Actually, the statistician in Texas makes district estimates of cotton production through the season. He interprets his prospects and works out district estimates, because the State is so big that looking at it as a whole he cannot see the particular parts. So he has the benefit of these weather reports for a particular area and analyzes each district in the State on a separate basis.

So there actually was within the State itself compensation for areas going down and improved prospects in the northwest.

Mr. THOMPSON. I know that he goes right on the ground and sees what is going on. These weather reports would have been misleading, so far as my section is concerned.

Mr. MORGAN. We have to remember that we make our record yields and our best yields on the dry side of average weather. So the trade has learned that when you hear reports of severe deterioration in the South, they know that with cotton, under normal conditions, it is really making.

So you have got to keep that in the picture at the same time you are looking at these weather reports.

Mr. SMITH. I think this points up the difficulty of trying to summarize weather conditions as relating to cotton in one sentence for

Texas. I do not think it can be done so that a person can get a true picture of what is happening in all sections of the State.

This is a brief statement taken from a much more general statement which is actually put together in Texas in cooperation with the State statistician's office. He collects the information on crop conditions that goes into the report. The Weather Bureau collects the information that goes in on the weather. They are put together in a joint report and issued jointly down there.

This is the national summary of that report.

Mr. ABERNETHY. That is not what Mr. Heimburger is pointing out. He is pointing out that in the early reports your reduction in production was in keeping with your reduction in acreage and not related in any shape, manner, or form to the weather.

Mr. BURKHEAD. We reduced the estimate half a million bales in November.

Mr. ABERNETHY. I realize that, but that was taking these reports for what they are worth. I do not know what they were worth. That was long after these weather reports were available.

Here is what disturbs us about this thing, and I confess that we are not experts in this field. I concede that you gentlemen are. As we understood you the other day, these weather reports, although available, are not considered in the Department in making the estimates.

As I understood one of you the other day, you stated that you assumed that these had been taken into consideration by your reporters and statisticians back in the field. If they did take those into consideration in Texas in July and August and September, then it certainly was not reflected in your production reports. The only reductions you made in Texas were in relation to your acreage reports.

Mr. BURKHEAD. That is on the face of it.

Mr. ABERNETHY. That is where 45 percent of this trouble happened last fall.

Mr. BURKHEAD. On the face of it, that is one way to say it, but using weather reports—I started out in Government service in the Weather Bureau, so that weather is not new to me—there is a lot, Mr. Heimburger, between the cup and the lip as to what happened to cotton in what you read.

As Mr. Smith said, whenever you make one brief statement about cotton it is based on a more complete story. The Weather Bureau has an enlarged picture on cotton which would show up cotton prospects much better.

Mr. HEIMBURGER. Let me say that I do not know what you mean by the enlarged picture on cotton, but the paragraph on cotton which is contained in the weekly bulletin that I have just read from, applying to cotton generally throughout the Cotton Belt, follows almost precisely the pattern established in Texas. It shows deterioration and uses the word "deterioration" almost every week up until shortly after the 1st of September.

Mr. BURKHEAD. That is right.

Mr. HEIMBURGER. Whereupon the weather changed, and from then on the weather was throughout the belt generally quite favorable to cotton.

Mr. BURKHEAD. As we have said previously—Mr. Newell, in fact all of us—the first indication that we had that our acreage was high was when we got the October ginners' reports.

Mr. NEWELL. May I interject a statement before we get away from this acreage proposition, Mr. Chairman?

A little while ago we were talking about planted acres. I am afraid it was left that the big factor influencing the reports was the awareness of the people of the possibility of acreage allotments.

I think there is another factor that we should mention for the record. The condition in the area was such that on July 1 there was considerable acreage on the border line and growers were in doubt as to whether or not it would be abandoned or not abandoned. There was some of that acreage, I am quite sure, that we got in our reports as planted, but they were not sure whether they would let it go or try to harvest it.

So there is this factor in the acreage in cultivation July 1 that I think you ought to remember in this particular picture here.

Mr. HEIMBURGER. It seems to me that that same factor applies to your weather. I may be mistaken about this, but I listened very carefully as you described how your reports are obtained from farmers. I have looked at the forms.

As I understand it, you send the farmer a form on August 1. Permit me to use corn instead of cotton as an example, because I do not know much about cotton and I did see a lot of corn grown when I was a kid.

Suppose a farmer receives your blank for the August 1 report on the condition of corn. It has been dry on his farm for 3 weeks.

The corn as yet shows no sign of damage. He has a wonderful crop. He has all of the weeds out, and it is now tasseling out nicely. It looks like a 90-percent crop.

That is all you ask him, "What is the condition of your corn today?" That is all he is supposed to tell you even though he knows that if this dry, hot weather that has been favorable to the growing of corn persists for another 2 weeks, he may have a 40-percent crop instead of a 90-percent crop.

Your blank does not even ask him that.

Mr. BURKHEAD. That is right. We do not want to ask him that.

Mr. HEIMBURGER. Where does this element of weather judgment come in? Somebody ought to allow for that.

Mr. BURKHEAD. We do not want to allow for judgment if it should run us over our cut-off date.

In the estimating procedures for all crops—corn, wheat, cotton, et cetera—we have the 1st of the month as the cut-off date. If on the night of the 1st, let us say, we have a freeze or a cyclone, or what have you, through a belt that lays waste great areas, we do not include that damage. In the first place, you could not get it that early in our 1st of the month estimates.

Mr. HEIMBURGER. I understand why you would not include the damage from an unpredictable weather condition involved.

Mr. BURKHEAD. You cannot do it. Otherwise, you would have everybody misled, and no one would know just what you are talking about. They would ask you questions like this:

"Does this include the freeze damage, or does it not?" That is the reason why we so indicated in our November cotton report, so that users of the information would know exactly what was in it and what was not in it.

Mr. SMITH. You can have just the converse situation from the one you mentioned where conditions are very poor and the man knows that if he gets a rain in 2 days he will have a big crop.

If you are going to tie this thing down to a particular period, a particular date, I do not see how you can take that sort of a judgment into consideration. You are bound to be wrong, I think, more times than right.

Mr. HEIMBURGER. I do not agree with you there.

As Mr. Burkhead knows from working in the Weather Bureau, there are very few subjects that affect our daily life which, while we can do less about, we have more records on, and I am not convinced that it cannot be statistically determined what the probability of damage to a corn or cotton crop is from 3 weeks of dry weather in August.

Mr. SMITH. Suppose you do not get the dry weather in August?

Mr. HEIMBURGER. That does not make any difference. If you do not get it, you do not use the factor.

Mr. SMITH. You are talking about going backward and not forward.

Mr. HEIMBURGER. I am assuming this theoretical example of the August 1 report, using corn instead of cotton.

It does not seem to me that it would be too difficult to determine the probabilities of the effect of 3 weeks or 4 weeks of dry weather in August on the corn crop.

Mr. SMITH. What estimate would you put out then? Would you put out an estimate based on that probability?

Mr. HEIMBURGER. Yes, sir.

Mr. MORGAN. I think you are thinking in connection with the September forecast.

Mr. HEIMBURGER. That is right, yes.

Mr. BURKHEAD. On this weather item.

Mr. HEIMBURGER. I got my months switched about.

Mr. BURKHEAD. Over in Virginia where you live you have some good corn. In some of those areas you can have a dry spell for 3 weeks, and then you can have a deluge overnight, what we call excessive precipitation, and it will all run-off and do you practically no good.

So when you get into weather, you have got to get into not only the amount that fell, but how long it fell.

Mr. HEIMBURGER. I think we are still arguing about a point that could be determined specifically.

Mr. MORGAN. In the 1930's there was tremendous interest in the relationship of weather and yield. Statisticians have done a tremendous amount of exploratory work in that field. They used weather-yield relations while studying and learning the techniques of statistics. So really there have been hundreds and hundreds of studies made on the relationship of weather and yield.

I can summarize briefly the general pattern that you get from those studies, but the essence of it is that those studies are not as good in forecasting yield as our reported condition and yield prospects are.

Mr. HEIMBURGER. Of course, I would not even suggest that your yield forecast be based solely on weather probabilities. But it does seem to me that when reports from farmers come in to your State statistician, showing only the one thing you ask for: "How good your crop is today;" not how good do you think it will be next week if this

dry or wet or cold weather continues, that your State statistician, or you here in Washington, should then apply to those reports on present condition from the farmers, your own judgment or his own judgment as to what the probable effect of present and past weather will be on that condition.

In other words, is the condition probably overstated in view of the probable weather which we are going to have in the next 2 weeks?

Mr. MORGAN. I have made quite a few studies on that.

Mr. HEIMBURGER. Do you now apply any such figure or any such judgment to these figures?

Mr. NEWELL. Your condition as of any given time is related to a historic record of what has resulted from that condition reported in that area.

Mr. MORGAN. So far as my experience is concerned, in taking weather into account in estimating yield per acre, you get less correlation or less results than you do in using prospective yield reports from farmers. You can take those same weather factors and get very high correlation with reported condition.

Mr. BURKHEAD. That proves your point right there.

Mr. HEIMBURGER. I see what you mean. Of course, you have 1 month's lag if you are having monthly reports from the farmers before the correlation begins to show up.

I want to sort of summarize. I am very much bothered and I believe you gentlemen are, too, by the fact that in this year's cotton report, since your acreage estimate did not change from September 1 when you reached your high point in your forecast to November 1, when you were more than 1,000,000 bales lower, weather factors must have made the difference in those 2 months, and yet the adverse weather in this year's cotton crop apparently took place chiefly before September 1.

Mr. BURKHEAD. That shows in the general statements. However, Texas is 1,000 miles one way, and how far the other?

Mr. THOMPSON. A thousand miles.

Mr. HEIMBURGER. I was referring to it throughout the belt.

Mr. BURKHEAD. I agree with you.

I do want to say this: That it seems from our talk this morning about weather, that the Crop Reporting Board has not done anything about it.

Mr. ABERNETHY. I do not think that anybody has done anything about the weather.

Mr. BURKHEAD. What I mean, Mr. Abernethy, is, that we can do something with it. That is what I mean.

In the Weather Bureau we could not forecast what the weather was going to be, say, 75 to 80 percent correct, within a 24-hour period.

The effect of weather on crop outturn has been one of the problems which the Crop Reporting Board has been worried with, and probably has done more work on over the past 50 years than any other one single item.

What have we come up with? We have come up with a few usable indications that work the way you talk about, into a specific index to chart against yields.

We have found that weather, rainfall primarily, for certain months of the year, mostly on a cumulative basis, plotted against the yields of wheat, particularly in the Great Plains and in some cases in the east-

ern part of the country where rainfall has the reverse effect, is about the best result that we have obtained—enough so that we feel like we should use it in our estimating procedure.

As Mr. Morgan says, if your weather is correlated with condition you automatically have taken into consideration the effect of weather on conditions.

I want to leave this point, that we are still delving into all possible ways under the sun of using weather. And the Weather Bureau is, too. We are trying to find out how you can really correlate it. I do not mean guess at it. If you do so, you will ruin somebody.

Mr. HEIMBURGER. You have to have some scientific basis for it.

Mr. BURKHEAD. For putting it into an index that will indicate conditions.

Mr. ABERNETHY. It seems as though the bulk of your trouble took place in this area that you have circled, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas.

Mr. BURKHEAD. Right.

Mr. ABERNETHY. Of course, that is where the bulk of the crop is produced.

Mr. BURKHEAD. True.

Mr. ABERNETHY. Was your trouble down there attributable more to the uncertain weather or to the faulty acreage reports, or about equal, one as against the other?

Mr. BURKHEAD. The acreage, figured objectively, would take care of an amount equal to the change we made in acreage between July and December—take care of its part.

As Mr. Wells said the other day, weather itself has caused at least half, if not two-thirds, of all of the trouble in 1951.

Mr. ABERNETHY. Is that generally regarded as an uncertain weather area in the production of cotton?

Mr. BURKHEAD. Texas and Oklahoma are, because they are areas where it can go from hot to cold, from wet to dry. Arkansas is also, in a way, because of floods in the Delta areas. And Tennessee.

Mr. ABERNETHY. There is very little cotton land that is flooded now.

Mr. BURKHEAD. I do not mean flooded. What I mean is temporarily flooded by heavy rains, so that cotton becomes too grassy; it is lost.

Mr. NEWELL. I would like to make one comment on that.

I was talking to a man in Biloxi who had been up in the Delta for some thirty-odd years. I mention this to show you the difference between this year and some others.

He said he had been up there for, I believe, 35 years. He said he had never seen cotton needing water in the Delta until this year, a rather unusual condition that developed there.

Mr. ABERNETHY. I do not know what the conditions were down there.

Mr. NEWELL. That is just indicative of what they were running into in the Delta.

Mr. HEIMBURGER. When?

Mr. NEWELL. In November. I did not ask what month he was talking about. He said he had never seen cotton needing water in the Delta before this year.

Mr. ABERNETHY. When was that?

Mr. NEWELL. It was down at Biloxi.

Mr. ABERNETHY. What time of the year was it?

Mr. NEWELL. I was down there in November.

Mr. ABERNETHY. He had reference to what season of the year?

Mr. NEWELL. The year as a whole. I did not ask him particularly what month he was talking about, but it was a cumulative factor.

I have here a report from over in Arkansas from farmers who reported, that might throw some light on the unusual situation this year.

In Clay County report, from the crop reporters, it says:

Something has happened to a lot of the bolls that were considered safe at the last report. They cracked open with one or two good locks.

In Craighead County, another comment from a reporter:

Still has us guessing. County estimates lowered 10,000 bales in the last few days.

From Greene County:

Too many top bolls affected by boll weevil.

Mr. ABERNETHY. What season of the year is that?

Mr. NEWELL. It is for the November report. They are reporting the November report these things that they had not expected.

Yield 25 percent lower than I thought 6 weeks ago.

I got that same comment from a man in Alabama.

Insects damaged a lot of bolls that will never mature.

A Mississippi county:

About 50 percent is June cotton. I thought the average would be one bale. Since beginning to open I believe it will be much less.

Mr. BURKHEAD. What time of the year is that?

Mr. NEWELL. It is in the November report. They are coming in now, and they are finding out that they have not got the crops they thought they had. These are their own comments.

Arkansas County:

Yield below expectations. We have more damage than expected. Dry weather hurt some.

From another county:

Bolls very immature. Bolls very small, immature.

Lee County:

Cotton hit by boll weevils and boll worms.

Those are some of the comments that came in.

Mr. ABERNETHY. Those came in in October?

Mr. NEWELL. They were comments on the November report.

Mr. BURKHEAD. Which were as of about the 1st of November.

Mr. ABERNETHY. Let me go along with what I started earlier this morning.

For Mississippi you have a 23 percent error. How do you account for that? That is a very high error.

Mr. BURKHEAD. Mr. Newell answered part of it a while ago, Mr. Chairman, in saying that the Delta, for one of the very few years, needed water.

You will notice in Mississippi that September prospects were about as good as they were in August. We made no change in the forecast. The forecast was lowered somewhat in October.

When we got the first ginners' reports for Mississippi, cotton was not apparently turning out as well as was thought earlier.

When the November forecast came in, I mean the November report, of course we had these ginners' reports which indicated definitely, as all of us have said before, that our acreage was somewhat high in most States, at least this area we are talking about here now, and some of that late cotton was not going to come through, the bolls were small, few on the plants.

As a result, we went in the direction of the ginners' indications and we certainly were right in so doing.

Mr. ABERNETHY. Of course, you showed an error in acreage there close to 300,000.

Mr. BURKHEAD. Yes; in acres. I say that is high.

Mr. ABERNETHY. The July acreage report was 2,625,000. In December it was 2,330,000. That is almost 300,000 acres difference.

Mr. BURKHEAD. That is partly due to the fact, Mr. Chairman, that we had a lot of cotton, and we always have some in your State, that went out before July 1. But this year we had more than ever.

Mr. ABERNETHY. Where does that take place? It does not take place in my section of the State.

Mr. BURKHEAD. You are up there in the highlands, about 75 miles from my home in Chester County, Tenn. We do not lose much cotton. It is relatively high up there.

It is lost in west central Mississippi, more or less the edge of the Delta, in those river bottoms.

And, furthermore, you lose some from grass, as you and I know.

Mr. ABERNETHY. What is the average abandonment of acreage down there in percentage?

Mr. SMITH. 1.9 percent.

Mr. ABERNETHY. This figure is far above 1.9.

Mr. BURKHEAD. That is right. That abandonment does not take care of the acres you get into the July figure. And there again I think that a part of our trouble this year—it is becoming more evident every year—is the act under which we operate, of having to peg the acreage at a July 1 level. And if you get some acreage in the July 1 estimate that should not be there it will stay there until December.

Mr. SMITH. That 1.9 percent is loss after July 1. We do not have a figure on the amount of loss before July 1. That is where one of the difficulties is.

Mr. HEIMBURGER. That 1.9 figure is your average total abandonment after July 1?

Mr. SMITH. Yes; that is right; actual abandonment.

Mr. HEIMBURGER. You always use the 10-year average figure on that to arrive at your August acreage; is that correct?

Mr. BURKHEAD. Remember, that average changes every year.

Mr. HEIMBURGER. Of course it would, but you make no effort there, either, do you, to adjust that abandonment figure to known meteorological conditions in an area?

Mr. BURKHEAD. No, sir; you cannot, and you do not. Our charts do that.

Mr. NEWELL. The law says we shall estimate acreage as of July 1.

Mr. HEIMBURGER. Suppose you know there has been a wet spring down in Mississippi and one-half of the cottonfields are covered with grass, you still would not change your 10-year average?

Mr. BURKHEAD. Average abandonment?

Mr. HEIMBURGER. Yes.

Mr. BURKHEAD. No; we would not. We would hope, and I assure you that is what you have to do in some cases.

Mr. MORGAN. May I just interrupt? This year we were following the situation as closely as we could, reading the weekly weather reports from the Weather Bureau and from the States.

You realize that weather conditions in that area were not normal.

We wrote to the statisticians in Mississippi, Arkansas, and Tennessee, and told them to check the situation in late July and in making their recommendation of production to make some allowance for the fact that abandonment might be less than the 10-year average, or might be more than the 10-year average.

Mr. ABERNETHY. In that section from Georgia across to Texas, where the bulk of your trouble showed up for 1951, have you analyzed that as against your previous years to determine whether or not that is generally where it shows up?

Of course, I realize that 70 percent of your crop is planted in that section.

Mr. BURKHEAD. We have in a general way, and plan to do even more before the 1952 crop season begins.

Mr. ABERNETHY. Is that your high error area, in other words?

Mr. BURKHEAD. This that you are talking about?

Mr. ABERNETHY. Yes; year in and year out?

Mr. BURKHEAD. Year in and year out your error will be where it is produced, so I would say 70 percent of it would be there.

Mr. ABERNETHY. We had South Carolina a moment ago, which was very accurate. We had Missouri, which was very accurate. California was quite accurate. New Mexico was reasonably accurate. Arizona was fairly accurate.

Have you determined that there is any particular reason, other than it is where the majority of the crop is produced, that there is where your greatest margin of error is found?

Mr. MORGAN. If we should define error as changes that occur after a particular forecast, I would say that Oklahoma and Texas, thinking offhand, would be subject to more error than any other area, because we have droughts there, we can also have extremely wet weather. So we get the full range of all conditions in those two States, whereas in Mississippi and the Eastern States we tend more or less to be slightly on the wet side most of the time.

Mr. ABERNETHY. Here is what I am getting at. I am attempting to make a suggestion which I realize I am not competent to make in this field.

In an analysis of the various sections of the Cotton Belt, if you find that these sections usually show up the highest error, then why would it not be a smart thing to increase, if you can, the inquiries and your gathering of statistical information in those areas and maybe reduce it a little bit in the others. That is, if you have to operate with the same amount of money.

Do I make myself clear?

Mr. BURKHEAD. I see what you mean.

Mr. ABERNETHY. In other words, you put the water where the fire is.

Mr. MORGAN. But you cannot always figure where the fire is.

Mr. ABERNETHY. I said if an analysis of your reports over the years shows that your highest error is in a certain specific section, why would it not be a good idea then to shift some of your services from other areas to those areas?

Mr. MORGAN. I can see your point there, if it is entirely on acreage, but if it concerns prospective yield, if it is weather, it would not apply.

Mr. ABERNETHY. It occurs to me that you could concentrate your work where your trouble shows up most often.

Mr. BURKHEAD. I think Mr. Newell will bear out this statement, in trying to estimate any crop in Texas you have a wide difference of factors. I assure you we could use more facilities in Texas to estimate the crop, because just to take field travel, for instance, two men trying to cover a thousand-mile-square State is quite a task. But that is somewhat beside the point. I want to point out the fact that you are thinking correctly, but we dare not weaken our forces in any State. We would not want to do it in any State.

Mr. ABERNETHY. I do not mean weaken.

If you had to work with your present ceiling of service, if you were confined to that ceiling, then I thought possibly it might be a good idea to shift.

Mr. BURKHEAD. Along the line you were talking about we want to know what happened in 1951, because we use these experiences from year to year in trying to better the future.

Mr. ABERNETHY. We know what happened. We want to know how it happened.

Mr. BURKHEAD. That is right.

Mr. ABERNETHY. I think I can improve your statement there a little bit.

Mr. BURKHEAD. That is right. We are in the process of analyzing all of the factors used, even the samples used during 1951 in estimating acreage and production, too, to see if we can detect what happened this year that has not happened before in our sampling procedures and what the farmers turned in.

Mr. NEWELL. I would like to point up that question just a little bit.

That is one of the problems we run into. We are now going as far as we can go on analyzing what did happen this year in much more detail. It is true that will not correct the error, the difference that we had last year, but it will point up this thing that you are trying to get at, what can we do in the future, what things might be done to avoid it again.

Mr. ABERNETHY. Yes, sir.

Mr. NEWELL. Actually, our facilities for doing that are limited, but we are aware of it and we are trying to get into that right now.

Mr. BURKHEAD. I wanted Mr. Newell to back me up on that statement.

Mr. NEWELL. Another point you mentioned is that a reduction in one area might be made to take care of another. I think we ought to remember that cotton is only one of the crops that is in this whole area. You realize that as well as all of us.

Mr. ABERNETHY. Yes, sir.

Mr. HEIMBURGER. I have just one more question that I want to ask, Mr. Chairman.

If the gentlemen desire, they can answer it off the record. I see there are three of you here who participated in making the September estimate of cotton production. That was a tremendously high estimade of cotton production. I know you are all familiar with the weather reports and with the other factors which you are bound to consider in your own mind as affecting a cotton crop.

I want to ask each of you, Mr. Burkhead, Mr. Newell, and Mr. Morgan, separately and individually, this question: Did you, Mr. Burkhead, when you signed your name to this September cotton report, feel that it was a little too high, a little too low, or right on the beam?

Mr. BURKHEAD. I felt, Mr. Heimburger, when I put my name on that September cotton forecast that, first of all, it represented Board action, that it represented more ideas than my own.

Mr. HEIMBURGER. In this case I want your own idea.

Mr. BURKHEAD. I will be glad to tell you.

I thought that as of September 1 that we had done the best job we could and that as of September 1 that report represented the true crop as we saw it at that time.

Mr. HEIMBURGER. In other words, you had no personal feeling whatever other than that this estimate was right on the beam?

Mr. BURKHEAD. Well, now, when you are dealing with anything which changes in nature, we do not know what is going to happen.

Naturally, I thought this—and so would anybody—that if conditions are not up to what they have been over the past between now and harvest, that we could expect a lower estimate, but if conditions are better than they have been, we could easily have 18,000,000 bales, as many people thought at that time we would have.

Mr. HEIMBURGER. Let me rephrase the question a little bit.

If we were operating under a different system, where your subjective analysis of conditions had been the final determining factor, and it had been up to you when this Board estimate was prepared, looking at all conditions that you knew about, either directly or indirectly, and you had had to put down a final figure, as the result of your subjective determination of what you actually thought was going to happen, not what would happen if the weather continued normal, but taking into consideration that you think the weather is going to continue normal from the past record, what would you have done with this figure?

Mr. BURKHEAD. You have asked so much there that I am afraid that any answer I would give you——

Mr. HEIMBURGER. Let us simplify it into one question.

Had you had to make a subjective determination——

Mr. BURKHEAD. If I had been doing it alone?

Mr. HEIMBURGER. The final steps on it—if after the Board handed you this figure and said, "Burkhead, you are our final expert on the thing, you adjust this as you believe from all of the factors involved it should be adjusted," would you have done anything to it?

Mr. BURKHEAD. No, sir.

Mr. HEIMBURGER. Mr. Morgan, how about you?

Mr. ABERNETHY. Mr. Heimburger does not want to let the record reflect that you did one thing and thought another, that is not his point.

Mr. HEIMBURGER. That is not it at all.

Mr. BURKHEAD. The Board figure stands on its own. I am behind it 100 percent.

I remember some comments that I made at the time that if conditions continue as they are now, and especially if they improve, that with the big acreage we have—and we had a big one—there is no question about it, then we could easily have more cotton than we have now.

Mr. ABERNETHY. I think his point might be explained this way: here is a group of men who sit down to arrive at a decision, to reach a conclusion with a certain statement of facts. Eventually there has to be some give and take between them to ever arrive at something that they will append their names to. It is generally a compromise of views.

Mr. BURKHEAD. That is right.

Mr. ABERNETHY. I think what he has in mind is that there was not absolute agreement on each and every point, but as you compromised your views you then came down to this.

Mr. BURKHEAD. That is right.

Mr. ABERNETHY. Is that not what you are driving at, John?

Mr. HEIMBURGER. Yes.

Mr. ABERNETHY. In other words, there could not have been exact agreement on everything between the men who signed their names to these reports. There are some who probably thought it was more.

Mr. BURKHEAD. Right.

Mr. ABERNETHY. And some who thought it was less.

Mr. BURKHEAD. Yes.

Mr. ABERNETHY. If so, we would like to know who and why, is that not what you are driving at?

Mr. HEIMBURGER. Not quite.

Mr. ABERNETHY. That is what I have in my mind.

Mr. HEIMBURGER. You go ahead and ask that question.

Mr. BURKHEAD. The reason we have a Board, Mr. Chairman, is that first of all we are all human.

Bear this in mind, while we have been in the business for 25 or 30 years, this is a science, this business of estimating crops. It is not guesswork. I can demonstrate to you in a minute the difference between a guess and an estimate.

Naturally, if we have a Board chairman, either Mr. Newell or Mr. Smith, we have five other members usually on the Crop Reporting Board, three of whom come from the field, and Jack Morgan and I are on every Board most of the time—Jack is always on it and I am on most of the months. As I say, we have three different men coming in from the various parts of the Cotton Belt each month. It is a different board every month, except for the Washington people.

As I said the other day, in estimating you always have a small range wherein you must use some judgment. That is where the chairman comes in.

Mr. ABERNETHY. We all recognize that.

Mr. BURKHEAD. You will find in practically every crop report where the Board convenes that not everyone is down to the nearest bale of cotton, but they are so near the same that the chairman has a very narrow range, in my estimation, in making the final adaption.

Mr. ABERNETHY. This system is so well systematized that you all come out with the same error?

Mr. BURKHEAD. That is exactly true, pretty close.

Mr. NEWELL. I would like to say this; that at the time of the September report, when it was released—at the time we made the September report, the principal concern was, generally, well, it might be a little too low.

Mr. BURKHEAD. That is right.

Mr. ABERNETHY. In other words, you thought you were there?

Mr. NEWELL. We thought we had hit it about as good as we could. Mr. Burkhead has explained our functioning, the Board process. The indications from the individual members are usually very close together. It is remarkable.

Mr. ABERNETHY. That is because of your mechanical process of arriving at it.

Mr. NEWELL. It is because by objective measures we narrow this band as far as we can in which judgment is exercised. We do everything to narrow that down, to get nearer to an objective figure All of our procedures are aimed at trying to get the indications.

Mr. HEIMBURGER. I was not trying to embarrass anybody in asking this question.

I feel now from what you have said that maybe I am wrong. I had felt that probably a larger measure of subjective judgment on the part of you gentlemen who have been working with this thing for years would be better than such close adherence to your objective data. From what you say, apparently not.

I take it from what you have said that your own personal feeling when the September report came out, clear aside from what you determined as a Board, that your own personal feeling was that it might be off.

Mr. Burkhead has indicated that his personal feeling was that it was just about on the beam.

I would like to finish this up and see how Mr. Morgan felt about it personally. I mean strictly personally.

Up here on the Hill there were many people who personally felt you were high and they did not hesitate to say so. That was a purely subjective judgment on their part.

What was your subjective judgment on it?

Mr. MORGAN. I felt that it was the best interpretation that we could make.

Mr. HEIMBURGER. I do not doubt that at all.

Mr. MORGAN. But I might add this, that in working with these statistics through the years you cannot help but gain some knowledge of the way they behave in years of high and low yields.

It has been our experience that we have to make a correction for a wet season, because boll weevils in wet seasons are going to be more than average. A wet season also gives you a bigger plant, and the farmer looking at that massive growth will tend to report conditions rather high. We take care of that in our August forecast by procedures we will show you later on.

Through the years it has been found that September is one of our critical months. If you go back to 1936, you will see that the estimate was lowered, I believe, about one million bales from August to September. Additional records for that year will show that the estimate went back to the August level.

So this accumulation of experience that we have had points up the general knowledge of the statistician, that you have to watch your September 1 condition very carefully, and through the years you find that if you add to the crop in September, later on it may come off. Between August 1 and September 1 the farmer looks at the cotton plant in a different way. First of all, he has a mass of bolls and foliage there. The first of September you have open cotton.

So it has been the policy of the Board to look at these September estimates on the conservative side.

Generally, I can say that the September 1 forecast this year is a conservative estimate.

Mr. HEIMBURGER. You feel yourself that if it erred at all it might err on the low side?

Mr. MORGAN. In terms of the past relationships we were conservative, therefore our forecast was about right.

Mr. HEIMBURGER. I mean your own personal feeling was that if there were to be any later change, probably it would show that your September estimate was on the low side?

Mr. MORGAN. We had as good a forecast as we could make as of that date. I was satisfied with the forecast as made at that time.

Mr. HEIMBURGER. You were completely satisfied?

Mr. MORGAN. Yes.

Mr. HEIMBURGER. You felt that it was just right?

Mr. NEWELL. I did not want to leave the impression that I was not satisfied. In interpreting it, they do just what Mr. Morgan has pointed out, relate them to other years and particularly watching years of similar conditions where we can pick those out.

(Mr. Burkhead drew an example on the blackboard.)

Mr. ABERNETHY. I have one other thing that I want to inquire into.

The July 1 acreage estimate was 29½ million in round figures, and the December 1 was 26,700,000 in round figures.

Mr. SMITH. The comparable figure was 27,997,000. You are talking about acreage in cultivation July 1.

Mr. ABERNETHY. What is the 26 million?

Mr. SMITH. That acreage finally estimated as harvested.

Mr. HEIMBURGER. December 1 acreage harvested.

Mr. ABERNETHY. Yes; that is right. How many acres is December under July?

Mr. BURKHEAD. 1,513,000.

Mr. HEIMBURGER. That is under the revised?

Mr. BURKHEAD. Revised July, yes; that is right.

Mr. ABERNETHY. The 27,997,000 are the acres harvested?

Mr. BURKHEAD. No, sir.

Mr. ABERNETHY. The acres planted and abandoned—it is all acres?

Mr. BURKHEAD. In cultivation as of July 1, as estimated in December 1951.

Mr. ABERNETHY. There are 1,500,000 acres. What portion of that 1½ million acres do you attribute to this point we were discussing a moment ago, that is, the tendency on the part of the farmers to report a higher figure anticipating allotments—how important is that?

Mr. BURKHEAD. No one knows what the measure of that would be. I think, and I am honest in this, that reporters reporting to our service, report pretty nearly the truth. I will tell you why.

(Discussion off the record.)

Mr. BURKHEAD. I think it entered into it.

Mr. ABERNETHY. Appreciably, would you say—that is a guess, I know.

Mr. BURKHEAD. I do not know.

Mr. ABERNETHY. It is reasonable to assume that it would enter into it?

Mr. BURKHEAD. It caused more bias than usual.

Mr. ABERNETHY. Then something ought to be done to eliminate that bias.

Mr. BURKHEAD. Yes, sir. I will tell you how you can do it.

Mr. ABERNETHY. All right, sir.

Mr. BURKHEAD. Get out there and see that cotton and measure it.

Mr. ABERNETHY. I know, I realize that it can be done that way, but I am not so optimistic as to say that we are going to have the privilege of measuring it.

Mr. BURKHEAD. I do not mean wholesale measuring. Get enough samples.

Mr. HEIMBURGER. That would eliminate the crop reporter, too, if you went out and checked on him by measuring.

Mr. ABERNETHY. I would like to go a little further. Is it reasonable to consider this, printing on that sheet that you main to these farmers, or on another sheet which you will enclose, calling to his attention the fact that this information will not be used in calculating acreage in the event of acreage allotments? Is it worth while to do that?

Mr. BURKHEAD. No, sir.

Mr. ABERNETHY. It is not worth while?

Mr. BURKHEAD. No, sir, and I will tell you why.

Mr. ABERNETHY. All right, sir.

Mr. BURKHEAD. The minute you start telling him what not to do, he is going to do that. We have studied that psychologically this year. We feel that if you go too far you put answers in his mouth.

Mr. ABERNETHY. Let me ask you this: Are those records available to the PMA officers when and if they start to allocate cotton acres, to check a man's report as against what he is now reporting that he planted?

Mr. BURKHEAD. No.

Mr. ABERNETHY. In other words, say that I am a reporter and I receive one of these sheets to make a report to you in August, and I have estimated my acreage at 100 acres and the next year we have acreage allotments and you do not have actual measurements and they call me in to the PMA office and they make a record of what I claim I planted in 1951; then the PMA people cannot go back to that report that I made as a cotton reporter in an effort to use that as against what I have claimed I planted?

Mr. BURKHEAD. That is right; under one condition only—that we obtain the permission of the reporter himself, because we keep this individual information confidential. And we do not mean maybe.

Mr ABERNETHY. Have they asked that privilege?

Mr. BURKHEAD. No, sir.

Mr. ABERNETHY. That is, in past years, to check it?

Mr. BURKHEAD. No, sir. On a State or district or county basis, yes.

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Mr. MORGAN. May I add just one point on that? That is one source of, you might say, bias, the farmer not reporting his acreage correctly.

There is another source of bias that is equally as troublesome to us under our present system of operation.

These schedules go out to the farmers.

It is up to them as to whether or not that report comes back to us.

If we get reports from only those who are willing to show that they have cooperated with the Government, and we do not have reports from farmers who have not increased their acreage, or have not planted cotton at all this year, our sample tends to reflect too much acreage. This is another type of bias or selectivity in reporting to us.

Have I made myself clear on that?

Mr. ABERNETHY. I think we will have to adjourn. I want to spend some more time with you gentlemen on this.

We will adjourn, subject to call.

(Whereupon, at 12:30 p. m., the subcommittee adjourned, subject to call of the Chair.)

COTTON CROP ESTIMATES

MONDAY, FEBRUARY 4, 1952

HOUSE OF REPRESENTATIVES,
SPECIAL SUBCOMMITTEE OF COMMITTEE ON AGRICULTURE,
Washington, D. C.

EXECUTIVE SESSION

The subcommittee met, pursuant to call, at 10:10 a. m., in room 1310, New House Office Building, Hon. Thomas G. Abernethy presiding.

Present: Representatives Abernethy (presiding), Albert Thompson, Jones, Patten, and Belcher.

Also present:

John J. Heimburger, counsel, Committee on Agriculture;

S. R. Newell, Assistant Chief, Bureau of Agricultural Economics, and Chairman, Crop Reporting Board;

R. K. Smith, Vice Chairman, Crop Reporting Board;

C. E. Burkhead, Head, Field Crops Division;

J. J. Morgan, Fiber Crop Section;

Ella Sue Minor, statistician, Fiber Crop Section.

Mr. ABERNETHY. The committee will come to order.

You can begin, Mr. Burkhead. It might be well to start with this book that you have supplied us with, with such comment as you care to make.

Mr. BURKHEAD. Mr. Chairman, a few days ago we went over briefly the scope of our cotton estimating procedures.

We covered, primarily, when the reports were released, what they contained, and what information was used in preparing them and where we got the basic information.

This morning we would like to go through this ring binder book that we have here of which I believe you have a copy before you.

Mr. ABERNETHY. Yes, sir.

Mr. BURKHEAD. We have a few sets of enlarged charts that might be used, although the room is perhaps not of such a character as to permit using them. Maybe we can go through the charts that are in the book, if you will bear with us.

The Crop Reporting Board, as you know, issues two types of crop reports on cotton during the season: One on acreage, and the other relates to production.

Before we start on these procedures I want to point out at the beginning that they will be long, somewhat boresome, if you are not particularly interested in cotton estimating, but I want to impress upon you again that we use in preparing our cotton and other reports, information primarily from farmers themselves and, of course, beginning in October for cotton, as you know, we begin to use the ginner's information.

In order to follow some of the procedures here we have prepared a brief outline which you will find in your book called, Brief Outline Of Steps In Estimating the Cotton Crop.

Mr. NEWELL. That is under "Cotton, General," Mr. Chairman.

Mr. BURKHEAD. Yes; it is under that heading, "Cotton General." It is the first sheet.

I suggest that you take that out of your books.

Of course, at the beginning of the cotton season we estimate the acreage in cultivation July 1.

For that we obtain information from what is known as the June acreage card. You will find that under your July heading.

We are explaining where the information comes from which we use in preparing the estimate of acreage in cultivation July 1.

Mr. ABERNETHY. Is it the card that goes only to the cotton belt?

Mr. BURKHEAD. That goes to a cross section of all farmers, Mr. Chairman.

While you are looking at that card you will notice question No. 15, which is one of the 25 questions on this card. The one I have is for Texas.

It says, "Cotton," just plain cotton. The number of the question is different on different cards for different sections.

You will notice we have two columns. The first one says, "Acreage for harvest this year, 1951," and the second one says, "Acres harvested last year, 1950."

Remember those two questions as we go along, because we will talk about them more later.

The other source of information used in July is the regular cotton inquiry. We call it "Schedule B," the green-blue colored sheet, right under the June card. Take a look at that one.

Question 1 is: "Total acres of all land in your farm or plantation." That is important to remember. We are going to be using that later on.

"Cotton on your farm or plantation now." That is actual acreage, you will notice.

"Cotton on your farm or plantation a year ago," actual acres.

"Cotton harvested on your farm or plantation, season of 1950"—the actual acres.

And then we ask for more information, such as pounds of cotton seed use, which is somewhat irrelevant to the July acreage report, but is used in determining what happened to the cotton seed crop.

Mr. ABERNETHY. I want to interrupt you there.

On a previous day one of you stated that this particular report was marked "Confidential," I thought. That is true of the June acreage survey, but I do not find anything on this July cotton schedule to indicate that it is "Confidential."

Is it confidential or not?

Mr. BURKHEAD. It is confidential, Mr. Chairman, in that if someone came in to any field office, even yourself if you went to the Mississippi office, and asked the State statistician to look over individual reports gathered in 1951 from the July cotton schedule, he would refuse you.

Mr. ABERNETHY. I understand.

Mr. BURKHEAD. I am talking about the individual, Mr. Chairman, that is, the information from the individual. The group data by districts or counties is a different story.

Mr. ABERNETHY. I am getting back to this acreage allotment point again.

Is this information available to PMA officials in the county of the reporter for the purpose of determining plant acreage in the event of acreage allotments?

Mr. BURKHEAD. No, sir, except under one circumstance as we mentioned the other day. You have to get the permission of the individual grower. If he says all right, O. K.; otherwise, it is not used and not made available to PMA.

Mr. ABERNETHY. The blank does not so indicate, though.

Mr. BURKHEAD. No, sir.

Mr. NEWELL. With our regular crop reporters, however, that is pretty well understood, through long years of experience with reporting. It does not show on this, however.

Mr. ABERNETHY. With all due deference, Mr. Newell, if I had received one of the blanks in June of 1951, after having gone through the allotment difficulties of 1950, I am quite sure that I would be very certain that I did not underestimate my acreage in this blank.

There is not a thing in the world on this blank to indicate that it is "confidential," or that it can or can not be used for the purpose of determining a man's acreage.

I just want to emphasize the point. You may proceed.

Mr. BURKHEAD. A little more in reference to the use of individual schedule data, Mr. Chairman. Based on experience we found that the farmers know pretty well that individual information on anything, prices, crops, whatnot, furnished to the Crop Reporting Board and its field offices is going to be treated with the utmost of confidence, because there have been many times when groups and individuals have tried to obtain certain information for individuals, particularly in the industrial field, and it has been refused. And they know it has been.

And that is one of the reasons why we feel we have success in getting individual farmers and others to report to us upon a cooperative basis.

Question No. 6 on the July cotton schedule is, What was the average date that cotton was up to a stand this year?

That question is used primarily to give some idea of the earliness or lateness of the crop.

There is a history, of course, in every State that goes back for a quarter of a century or more on these questions, and having that information every year you can gage the earliness or lateness of the crop.

The fertilizer information is published in our August cotton report and is a very important series of data, particularly in the Cotton Belt.

From these two cards we prepare certain acreage indications which I would like to explain right in the beginning, because when we explain how we arrive at them, what they are, what we call them, you will understand what we are talking about.

Turn back to the June acreage card.

I will use the blackboard, with your permission.

We work what is known as the C over H indication (C/H), and so forth.

Mr. NEWELL. I think it would be well to tell them what C means.

Mr. BURKHEAD. I am going to put them all down first, and then go back, if that is all right.

We do not need to worry what they mean at the moment.

Next we have H over H, C over H, P over P, C over C, H over H, and so forth.

We have another indication, the ratio to land.

What does C mean? That means the current year.

H means historic year reported currently.

C over C means the current year matched with the current report for the previous year.

This is the same.

The P over H means planted acreage over harvested, planted this year over harvested last year.

The top is always the current year, the denominator is the previous year.

That is harvest over harvested.

This is the current acreage reported harvested, divided by the historic acreage reported now that they had last year, and it is the harvested acreage.

This is planted over planted acreage.

This is harvested over harvested and harvested over planted.

As to ratio to land, let us take as an example Mr. Thompson, Mr. Abernethy, and Mr. Jones who reported on this June acreage card in 1951.

Here is Mr. Jones, Mr. Abernethy, and Mr. Thompson. This is the 1951 acreage, and this is 1950—10 and 11, 9 and 8, 50 and 45.

Let us assume that is all of the sample we received. That is 69, 56 and 8 is 64—69 over 64 is 108 percent. This is cotton now. You reported cotton acreage.

You three men reported that on your farms there were 100 acres here, 200 here and 300 here. That is 600 acres of land.

This is 69 over 600, which gives you the ratio to land, or, in other words, what percentage of your total land is in cotton. That is all it is.

Mr. ABERNETHY. Let me see if I understand what you are driving at.

Does this represent a sample, we will say, of your entire survey of your June acreage card?

Mr. BURKHEAD. Yes, sir. Let us assume that is the sample. This is how we work it out.

Mr. ABERNETHY. This says, "acreage for harvest this year" and "acreage harvested last year."

Mr. BURKHEAD. In June, of course, that is going to be more or less of a planted acreage. So we could work that both ways. And the current acreage would be the planted.

Of course, for harvest now represents the acreage standing July 1.

We have this 108 percent now and it can be worked into these two items, that is, you see you reported right now that you have 10 acres in 1951 and you reported now on this card that last year you had 11 acres. Current acreage reported currently, and the historic acreage or last year's acreage reported now. That is where we get this current over historic, or C/H.

And this P over P, and H over H, P over H: it's just a matter of what acreage comparison you wish to make.

Pursuant to what you report on the column, I mean. For instance, take a look at your cotton schedule.

Mr. ABERNETHY. You use that system with all crops?

Mr. BURKHEAD. With all crops, that is correct. And there is another one that we can do on this card. However, let us go back to July where we get this planted to planted indication.

Question 2, "Cotton on your farm or plantation now." Notice that. And then, "Cotton on your farm or plantation a year ago."

There is what we consider, what we can term planted over planted, or, for cotton, as you know, we cannot say it is planted, it is "in cultivation July 1."

Then question 4, "Cotton harvested on your farm or plantation, season of 1950." That is where we get the P over H, planted this year over the harvested last year. That is the combination, P over H right here.

That is this first question here, No. 2, planted this year, and question No. 4 specifically says "harvested," so that it is planted over harvested. We chart those, for a series of years to tell how good that 108 percent is, which in this case could be construed two ways.

Mr. ABERNETHY. Mr. Burkhead, I am terribly confused.

Mr. BURKHEAD. I know you are.

Mr. ABERNETHY. What is the point you are getting to now?

Mr. BURKHEAD. The point I am getting to is what these indications are. We are trying to explain what an indication is, so that we can read it on these charts as percentage change, indication of percentage change in acres. You are thoroughly confused now, but I think as we go along you will not be.

Mr. ABERNETHY. I was asking without being critical, do not misunderstand me.

Mr. BURKHEAD. I understand. I told you that it would be very difficult to explain it.

We consider an individual report just as important as we would the final indication, in other words we look at every single schedule that comes in and do what we call edit them—we look at every one of the cards, one by one. There are thousands of them, to be sure. We look to see that the entries are proper, because some man might get mixed up here on the June card and report his acres harvested last year, and for last year he might have reported in bales.

Mr. ABERNETHY. Do you have a means of comparing your June acreage card with the reported card of the previous year?

Mr. BURKHEAD. That is a C over C right here.

Mr. NEWELL. The answer is, "Yes."

Mr. BURKHEAD. For example, Mr. Abernethy's card for 1951 is here. We look in the record and find that he returned a card last year.

Mr. ABERNETHY. When do I pass out of the picture as a crop reporter? Is my name maintained year in and year out, year after year?

Mr. BURKHEAD. Yes, sir, for this card it is, unless you drop out for some reason.

Mr. ABERNETHY. Suppose I missed or failed to make a report for a year or two, am I dropped from the roll?

Mr. BURKHEAD. Not necessarily. You might be sent a reminder.

Mr. ABERNETHY. Suppose I did not respond to the reminder?

Mr. BURKHEAD. Well, we would drop you. Of course, in the meantime we would add somebody else to the reporting list. We try to keep these samples maintained as cross section samples so that the information coming from this card represents the general behavior of all farms in the county or State or whatever area is represented.

Now then, the ratios to land are nothing more than what percentage of the total land is in cotton. Those ratios are available for a long series of years and are plotted and read on that chart.

Let us take a look at how these indications are read on charts. Look at chart 1–A.

That says "Georgia, all cotton acres."

The June individual farm acreage survey, which is shown as IFAS, represents the ratio to land from this June card or in other words, the percentage of the total land in cotton.

You will notice an arrow for 1951, right close after the figure 6, which means this year for this State this survey when we worked it up indicated a little over 6 percent of all of the land in the State was in cotton.

Well now, if you read this ratio on the chart you will notice where the acreage finally came out for 1951, right under the diagonal line there.

You see, all of those other dots represent the history of this indication in June, how it finally turned out for each of those seasons. You will notice quite a bit of diversion from the regression line in this case.

We will not try to explain what happened in some of those earlier years, because it means that something happened after June to change the picture, otherwise every one of those dots would fall on the regression line.

Mr. PATTEN. The individual farm acreage survey is based entirely upon the report of these cards that you get back?

Mr. BURKHEAD. The June card there.

Mr. PATTEN. You do not do any of this route reconnaissance?

Mr. BURKHEAD. Not for this indication.

On the Crop Reporting Board in July each member is given this chart and this indication which is already worked and entered on the summary sheets. Each Board member takes the chart and determines where he thinks the dot should be read. Of course, not all would read that dot at the same place. I am sure that if all six of you read it as members of a board you would not be very far off. You would not be very much different.

Well, when those indications are read they are put on individual work sheets. We have some of them here.

As I say, gentlemen, you must remember this is quite detailed, but this system has been going on for many years and I know you are at a disadvantage. We will let you have the July sheet.

Mr. Jones knows something about this because we went over the procedures with him. He has a little more idea than probably some of the rest of you.

I want to impress upon you gentlemen that this is not a haphazard business. As I say, these reports are studied carefully by each individual member right down to this final indication. I can assure you that the estimate we make is no better than the indications. Our men have to know what is in here, our State men, I mean—they have to know or understand what this indication is why it is as it is.

That is where field travel comes in. That is where discussion with those who know cotton comes in, as to why these ratios in general look as they do.

You have the sheet there. Each Board member has that sheet and he has these charts, of course, before him.

When he reads this June acreage chart he puts it down in a particular column. I would not worry about where it goes. It is put down for each State.

We are not through yet. We have other indications of the July acreage. So turn to chart 2–A.

This indication comes from that same card, that is the C over H, that 108 percent that we just worked out. That is what this chart is.

In estimating cotton we do a little differently than we do in some of the other crops in that we work indications of acreage change into an actual acreage and read it on the chart; in other words, if this came out to be 108 percent for Mississippi we would multiply that by last year's acreage, whatever it is, and we have immediately an estimate of the 1951 acreage, of course.

But in order to take out the bias or pit it against the history for all previous years we chart that index on here. And you will notice for 1951 it is about 14.5. You will notice the arrow here.

And then you will notice the 1951 dot is right about 14.

That is how it came out, gentlemen, for 1951. That is not exactly how the Board members may have read it.

Mr. ABERNETHY. Your Georgia acreage report for 1951 turned out very well.

Mr. BURKHEAD. Yes.

Mr. ABERNETHY. You were not too much off.

Mr. BURKHEAD. That is right.

Mr. ABERNETHY. You made very little change in it.

Mr. BURKHEAD. That is right.

Mr. ABERNETHY. At the end of the year?

Mr. BURKHEAD. Yes.

Mr. ABERNETHY. This system worked very accurately for Georgia in 1951, but it did not in some other areas.

I know you are concerned about what happened on acreage in 1951.

What was wrong, if anything, with this system in 1951 in these States where you were so far off on acreage, or have you come to any conclusions about that?

Mr. BURKHEAD. We have discussed that previously here at some length. As I say, the estimate is no better than the basic indication. In some places, as we know, some acreage got into the reports on this green schedule that had gone out before July 1, particularly in parts of the northern area of the middle south around where you live and I live, in Arkansas, Oklahoma, part of Texas, and so forth.

But, Mr. Chairman, as to why our system didn't work alike in all States let us take a simple example. Suppose we all have colds. The doctor will give us all pretty nearly the same treatment. It will cure some of us, it will help others a lot and some of us it will not help at all.

I do not want to alibi for the system. We just simply missed it a little bit, but we never miss acreage much, remember that, about 2 percent is the average miss. The Georgia figure was 4 percent off.

Mr. ABERNETHY. I did not think it was quite that much.

Mr. BURKHEAD. It is just one of those things where the best laid plans will go somewhat wrong.

Furthermore, we do not want to foreget the fact—I have studied this weather pretty carefully over the week end—that when you read the weather pattern of all of these States I now wonder how we came as close to this crop as we did in some of these States.

Mr. ABERNETHY. Let me make this observation and see if this is not correct.

Your largest margin of error on acreage occurred, did it not, in States where there was the greatest increase in cotton in 1951 with the exception of possibly California?

Mr. BURKHEAD. Yes, you take in Texas, Oklahoma, we missed the acreage in South Carolina reasonably far, 119,000 acres, but we hit production there.

Mr. ABERNETHY. But you did not miss your production in South Carolina?

Mr. BURKHEAD. No.

Mr. PATTEN. How do you figure the yield, per acre against acreage—was that in that formula you explained?

Mr. BURKHEAD. Yield per acre. We do not figure that in July, but in August we do figure the yield per acre.

Mr. NEWELL. We get the first production report in August.

Mr. BURKHEAD. We will go into that in a minute.

Mr. PATTEN. You have a history of previous averages per State. For instance, we have a large yield, larger than you have in the South. You figure that somewhere in this.

Mr. BURKHEAD. In August we figure the yield per acre, sir.

Mr. PATTEN. Not until August?

Mr. BURKHEAD. We do not make production forecasts until August.

Mr. PATTEN. You have a history in the previous experience that ought to influence you, whereas certain States are going to grow a bale and a half, two bales and some others will get one-half bale. Should that not influence your early estimates?

Mr. BURKHEAD. It does, but not the acreages, sir.

Mr. NEWELL. We are talking about acres now.

Mr. PATTEN. Is that not part of your margin of error—you figure so many bales—that is where the difference comes in, and if you do not figure the yield per acre, what difference does it make how many acres you have—it is the number of bales.

Mr. BURKHEAD. Not necessarily. You may remember that the thing that is going to set the price of cotton in early 1952—we have not made any forecast yet—is probable 1952 acreage. It is generally recognized as a fact by all of the industry that the thing that will affect prices between now and the first acreage report is what people think the acreage in 1952 will be. Mr. Abernethy knows that. Mr Thompson knows that.

Mr. PATTEN. It is fundamentally how many bales of cotton you get and the acreage has nothing to do with it.

Mr. BURKHEAD. You cannot get the bales without you have the acres.

Mr. PATTEN. Unless you are going to seed it or interpolate as to the possible amount of crop they will have per acre.

Mr. BURKHEAD. You do that, but we are explaining the other now.

Mr. PATTEN. You do that in August, though.

Mr. BURKHEAD. We are explaining now how we arrive at the July 1 acreage in cultivation.

In August we make the first forecast of production. You will see where yield takes quite an important part.

Mr. MORGAN. I might add that we treat it in two phases. Cotton production consists of two components, acreage and yield per acre. The first thing we do is to establish the acreage and the 1st of August we get at the yield.

Mr. ABERNETHY. I understand that.

Mr. THOMPSON. This might be a point for our record to reflect the opinion of a very excellent cotton man down in Galveston, Tex., my home town. He is a merchant, factor, a banker, and he is a considerable farmer. He knows all of the different angles of the cotton business.

When we started these hearings I wired him and asked for his opinions, which he gave me in brief, but they are pertinent to what we are discussing now, and with your permission I will read two brief paragraphs into the record, and then I would like to see what the opinion of these gentlemen would be.

He says:

> In the opinion of the members of our firm and the heads of one or two other firms whom I have consulted over the phone, I think I can report general accord that the estimates are useful and are honestly and faithfully made. Believing in the integrity of these estimates, I venture the practical suggestion that the earlier estimates are necessarily subject to unpredictable effects of the weather upon the crop approaching maturity. When the crop reaches a critical stage in its existence, predictions of its ultimate out-turn become, even under the best of organization, more questionable and inaccurate.

The next paragraph says:

> It would be decidedly to the interest of the producer, the American spinner and to the merchandiser of cotton that inaccuracy in the estimates should be materially reduced. If the first estimate or prediction of the ultimate yield not be issued before the month of September, it should contribute to increased confidence in its accuracy and hence to its value.

That is signed by I. H. Kempner, who is well known in the cotton trade.

What would be the effect of withholding any estimate at all until the month of September?

Mr. BELCHER. Could I ask just one question to clear up something?

Was he advocating that there not be any report made until September—is that what I understood?

Mr. THOMPSON. That is correct. Let us get it clear just what he did suggest.

If the first estimate or prediction of the ultimate yield——

Mr. BURKHEAD. He means production, I guess.

Mr. THOMPSON. That would not have any effect on your July report.

Mr. BURKHEAD. It covers acres in cultivation.

Mr. THOMPSON. That is merely acres in cultivation, has nothing to do with the yield. That is the point you were making.

Mr. PATTEN. Is it not true that the acres in cultivation come out of the fact that you have had in years previous an acreage allotment and when you do not have it, it does not become so important?

Mr. BURKHEAD. Will you state that again?

Mr. PATTEN. The fact that you spend so much time in figuring acreage in cultivation dates back to the fact that when you had acreage allotments that was an important thing to consider.

Mr. BURKHEAD. No, sir.

Mr. PATTEN. Now you do not have acreage allotments and that is not an important item.

Mr. BURKHEAD. It is very important, sir, always is, because from it we make the first forecast of production in August.

Mr. PATTEN. I thought you made that from the first ginners' report.

Mr. BURKHEAD. No; that is in October. We make two production forecasts before we have ginners' reports. The first one is as of August and the second is as of September.

Mr. NEWELL. I would like to comment on that suggestion there.

Of course, if you wait until September your whole industry would be dependent upon any information that the trade or anybody else would pick up generally through that period.

Now everybody forecasts. You and I forecast all of the time in personal things and otherwise.

Just on that point it seems to me that you would have to consider the fact that everybody in the industry would be speculating on what the out-turn would be and it would be desirable to have an official report.

Mr. ABERNETHY. Mr. Newell, so far as that is concerned they speculate on what it will be every month.

Mr. NEWELL. That is right.

Mr. ABERNETHY. There is speculation from the planting season on.

Mr. NEWELL. That is correct.

Mr. ABERNETHY. But I think the point that this man has in mind is based on the fact that, probably, your highest error is akin to your first report.

Mr. NEWELL. The further away you are from the final out-turn, that is right, because there are more things that can affect it the farther back you get.

Mr. THOMPSON. In effect what he is suggesting is that you delay for 1 month your production forecast.

Mr. NEWELL. The pressure we get mostly is for earlier forecasts, rather than later forecasts. That is generally true.

Mr. THOMPSON. I suppose that is to enable the speculators to work.

Mr. NEWELL. It has a stabilizing effect.

Mr. THOMPSON. To make an intelligent estimate, in other words.

Mr. NEWELL. It has a stabilizing effect in the whole industry, because we do make an unbiased analysis of the conditions as they are.

Mr. ABERNETHY. Not that it would have helped the situation this year, I mean it would not have helped the situation this year to have eliminated the early forecast.

Mr. BURKHEAD. Very little.

Mr. ABERNETHY. Because the subsequent forecast was even higher and was more in error than your first forecast.

Mr. BURKHEAD. At least, showed a greater difference from the December estimate.

Mr. ABERNETHY. That is, from December, yes, that is right.

Mr. BURKHEAD. Why was that? Let us see.

In reading the weather comments—and we have copies which it might be well for Mr. Heimburger to read—he is the weather expert here—they indicate very clearly that the September forecast, even though slightly above August, was calling the facts as they were.

Mr. ABERNETHY. Suppose we get back to this binder and move along a little faster.

Mr. BURKHEAD. All right.

Mr. PATTEN. I want to ask two questions.

You have Egyptian cotton on here. How does that figure? Is that included in your national estimate?

Mr. BURKHEAD. Yes, it is separated at one place in the report and then included in the United States total.

Mr. PATTEN. In the total as it is announced, that also includes the Egyptian cotton?

Mr. BURKHEAD. For your State of Arizona it includes all cotton, but we estimate it separately.

Mr. PATTEN. If you took the 7-year average since 1945 of the average yield per acre, per State, and then admitted that it was a hazardous guess to estimate the last production, subject, of course, to the influences of weather, how badly would you be in error?

Mr. BURKHEAD. I do not know. We would have to figure it up, to be sure, but a little later we will show you how we use the last 7 years in working up the yield per acre.

Mr. PATTEN. The only influence would be the unusual weather.

Mr. BURKHEAD. The shift in acreage would or could cause a lot of change in the yield.

Mr. PATTEN. I see that.

Mr. BURKHEAD. You see, if you had a shift to higher producing areas like we have in the West on the irrigated land, the average yield would tend to go up, although the acreage could go down.

Taking the 108 percent that I was telling you about a while ago, multiply it by last year's acreage and we get an indication of the 1951 acreage and read it off the chart. The indications are put on the sheet such as you have by each member of the Board, and he then continues to other indications.

Turn to chart 3–A.

There is the indication the chairman was talking about, where you match the same cards for 2 years and get the percentage change.

Mr. PATTEN. Chart 2–A showed a further regression, did it not, you said?

Mr. BURKHEAD. This line here does not say what it is. It is a one-to-one line in this case. It means that for a certain change on the X axis you have the same change on the Y axis. That is, an increase of 1 acre on the X across the bottom should result in an increase of 1 on the Y axis.

Now, as I say, if this indication had not been subject to some bias and had some changes not occurred after the information was gathered and prepared, all of these dots would fall on that one-to-one line. but, as I say, these charts are all for one purpose, to narrow the line where you have to use your judgment.

You see you have to use judgment, and do not forget it, in the estimating procedures, but all of these processes are to narrow that range of judgment as much as possible.

Is your question answered, sir?

Mr. PATTEN. Yes. You said 4 percent on the first chart.

Mr. BURKHEAD. That is on the final answer. You see, these are indications. We are not yet getting ready to say what we are going to take. We are narrowing this line down to where we have indications that vary from X to X plus and so on, and when we read all of these indications and we put them on that sheet, then we, as an individual board member, will take a look at all of those indications of the 1951 acreage and put down what we think it ought to be, and the four other members do the same thing. They are summarized on form for the chairman. And then he determines what the estimate shall be.

We are on chart 3–A now. This is where you match reports from one year with the next for the same man. He reports his acreage now. Last year he reported what he had then.

We work that percentage times last year's acreage. That gives you another indication and you read it off the chart.

Turn to chart 4–B.

Those are the three charts that we use based on information from that card, the June card, ratio to land, C over H, C or C.

4–B. That information comes from the blue-green schedule—July 1 cotton—where we work the ratio to land again.

Again that ratio to land is nothing more than acreage of cotton as a percentage of all of the land on your farm. When worked for the entire sample it indicates the percentage for the State.

You see how good that chart is. What does it indicate to you? That is a one-to-one line. No, it is not. It must be a proportional line through 1939.

What is a proportional line? Maybe we ought to explain it.

You take the dot 1939 and work X as a ratio to Y, and pick out another X anywhere, small or large, and figure the Y. Now you have two dots, draw your line through those two dots and you have what is known as a proportional line. You can pick any other year you want to. It merely gives you the slope of the line.

That chart again is read. 1951 is down at the bottom there. And you see where 1951 finally fell. It is not a bad reading, even though Georgia now stands 4 percent or was 4 percent too high in July.

Chart 5–B is the July direct. Forget the "direct." It is the July C over H planted to planted. That is a percentage. The acreage reported is from the same card.

That is worked from item 2, divided by item 3 on that blue-green schedule. I mean question 2 over question 3. That is where it comes from. That is cotton on your farm now and cotton on your farm a year ago. Current over historic. That is the current acreage reported currently and the historic acreage also reported currently.

Planted over planted means planted acres over planted.

Again, those percentages are multiplied by the last year's acres. That is the index to be read off the chart. That is not a bad chart.

The next one, chart 6–B. C over H, planted over harvested.

That is gotten by dividing question 2 by question 4 on the green schedule. "Cotton on your farm or plantation now—cotton harvested

last year. Planted this year over harvested last year, current over historic."

And there again your index is prepared and read from the chart, and you see where 1951 stands.

I daresay I would not have read it much different if I had been reading the chart.

Those are the indications used in preparing the July acreage in normal years.

This year, of course, we had another 100,000 names that we sent questionnaires to and got back roughly 30,000 returns. We got similar indications from these, but we did not have history on that 100,000 list. Therefore, we had no charts on which to base that information. We could have read them on these charts, but that would be reading the behavior of one sample against another, which is not a safe procedure.

Mr. NEWELL. It is dissimilar, I would say.

Mr. BURKHEAD. Yes, dissimilar.

I might throw this out for elementary thinking, that each individual card we get back from the sample actually is an estimate of the cotton crop in that State or that county, wherever you are from.

We will start with Texas. If you were a cotton grower you would send in a card and you might say that you had 1,000 acres ofcotton this year and had 800 last year. That indicates that on your farm you have 125 percent as much cotton this year as you had last year. Basically that is an indication of the change in Texas, so far as that is concerned, but you can see that it would not be very stable, based on one report. Therefore, you keep adding to the sample, building it up until it is large enough to be representative, or a cross section of all farmers. So that when we read the indication on the chart, compared with the history, it gives an excellent indication of the change for all farms. Basically, that is what we are striving for.

That is all we use in July.

Where are we now?

We have our indications on this work sheet. You know the story from there.

It goes to the chairman. He adapts the estimate. It is put down, becomes the official estimate, goes on through the processes of duplication, and so on, and is released. Here is the report, right under the last chart, July 1951. There is the final product right there, gentlemen.

Are there any questions before we proceed? That is the first estimate—cotton acreage in cultivation, July 1.

Mr. ABERNETHY. I understand that.

Mr. BURKHEAD. We are through with acreage as such until December, that is, cotton acreage in cultivation July 1. This acreage is going to stand.

Are there any questions before we get into production? I know that it may be hazy to you, and I think——

Mr. ABERNETHY. That is all right. Let us move on to August.

Mr. BURKHEAD. The first production forecast is made in August. How do we do it? We send out an August cotton schedule as you will see right here. It is the blue-green sheet. It goes to what we call our regular cotton reporters.

Mr. ABERNETHY. This inquiry is supposed to go back to the same one that the inquiry was mailed to the previous month?

Mr. BURKHEAD. Not necessarily, Mr. Abernethy.

Mr. ABERNETHY. Generally speaking, that is true?

Mr. BURKHEAD. Generally speaking, it goes to our regular cotton reporters.

Mr. NEWELL. To the same list that the blue-green schedule went to, just a part of them, I mean.

Mr. BURKHEAD. Just a part of them.

Here we get back to the regular cotton reporters. You have a list showing what the percentage return is.

Mr. ABERNETHY. We recall that from the other day.

Mr. BURKHEAD. This is going to get a little tedious, I will tell you that right now.

Mr. ABERNETHY. It is already tedious.

Mr. BURKHEAD. I do not know that I will know every bit of this, so I am going to call on the others here, because we are getting into deep water fast.

In production again we use indexes. You will notice here on this schedule that the reporters are asked to report two of these various questions here, the condition of the crop on August 1 compared with normal, how many bolls per plant or to date this year were safe. This is all used later. Probable yield per acre in your locality this year. Seed cotton and lint cotton.

Why do we ask both?

Mr. ABERNETHY. I think we all understand that.

Mr. BURKHEAD. Somebody might wonder why we use space to get both.

On what date were the first open bolls this year?

And boll weevils, considering complete infestation is 100 percent, what would you estimate the present infestation to be?

Mr. ABERNETHY. Before you get into some of this detail I think I raised a question the first day you were here or maybe later about the size of the bolls.

A cotton expert pointed out to me that the bolls were smaller than usual and that it would be advisable to inquire as to the size of the bolls.

What is your opinion about that?

Mr. BURKHEAD. Any added information will help in forecasting the cotton crop. It is a fickle crop to estimate, as you know.

We have made volume measurements of a specified number of bolls. There again it was in the early forties. With travel cut down that problem has never been explored scientifically as far as it should be. Our first impression is that X number of bolls, measured in a bollometer, as we call it, read against yield, was not correlated with yield. Other things appear to influence yield more than that particular item.

Mr. ABERNETHY. Have you concluded that is of no value?

Mr. BURKHEAD. We feel there are other things more important at the moment.

Mr. MORGAN. We had a question on the size of bolls on our cotton schedule through 1949. We had to reduce items, and that was one that was dropped at that time.

Mr. ABERNETHY. Why was it dropped?

Mr. MORGAN. Primarily, because of a question from the Budget Bureau as to what value was placed on that question. Did the question give any added information?

Mr. ABERNETHY. Did you conclude that you did not get any worthwhile information?

Mr. MORGAN. We felt that in unusual years it did give us some worth-while information, but we were not successful in retaining the item. We dropped it.

Mr. ABERNETHY. Of course, the Budget Bureau is continually asking you to evaluate your different systems?

Mr. MORGAN. That is right.

Mr. ABERNETHY. They are looking at the money angle of it.

Mr. MORGAN. Yes.

Mr. BURKHEAD. They are not bothered with reports.

Mr. NEWELL. The Division of Statistical Standards of the Budget Bureau, Mr. Chairman, reviews all schedules and all questionnaires that go out. They raised a question on this particular item on the schedule. And as Mr. Morgan says in the ordinary year, apparently it was not as good an indication as some other indications and was dropped out for that reason.

I think that some of these things you are getting into now, like boll sizes, are apt to be much more significant in years of unusual situations than they are in the ordinary year.

Mr. ABERNETHY. You cannot predict what year the situation will be unusual.

Mr. NEWELL. That is right, I agree with you.

Mr. JONES. Of course, more important than the size of the boll would be the change in varieties that is taking place, and the yields that could be expected from the different varieties, too.

Down in our section over the years we have more or less stabilized on certain varieties, especially in certain communities.

Mr. NEWELL. That is right.

Mr. JONES. I think that information would have been more helpful in determining yields than the size of the boll.

At the same time, you would have gotten that because certain varieties do have pretty uniform size of bolls; do they not?

Do you have any place on there showing the trend in the change from one variety to the other?

Mr. NEWELL. No, I do not believe we have that.

Mr. BURKHEAD. No.

Mr. NEWELL. That is not on the schedule. However, you speak of the Smith-Doxey one-variety program.

Mr. JONES. Yes.

Mr. NEWELL. We are advised of the increase in the one-variety communities from year to year, at least we know what the trend is toward that development.

Mr. ABERNETHY. That information would be easier obtainable from the agricultural employees in the various sections.

Mr. NEWELL. That information is easily obtainable through the Cotton Branch that operates and administers the Smith-Doxey program.

Mr. JONES. There is one thing on your program that would not show. It does not show where I may have changed from one variety to another, and that would affect the yield that I was going to get.

Mr. BURKHEAD. You are right there, Mr. Jones, in that varieties are changing fast. The gentleman from Arizona knows of the improvements that have been made in his State, all through the irrigated West, and even in the old half-and-half territory, Mr. Abernethy. They have about quit that type. They have gone into the more improved varieties which do change the picture. They may not increase yields particularly, but they may increase the quality which, of course, is where the money comes from, as you gentlemen know.

Mr. ABERNETHY. I expect that this is a good place to take up that point that you had in mind, Mr. Heimburger.

Mr. HEIMBURGER. I want to make some comments on your blue-green August sheet, gentlemen, and get your reaction. I will be rather blunt, to start with.

I think it is a very poorly worded questionnaire.

Mr. BURKHEAD. We want you to be honest and truthful.

Mr. HEIMBURGER. It is quite confusing to me, and I am used to dealing more or less with statistics and percentages and the like.

I really wonder how you can get as accurate a picture of the crop condition as I think you do get from this questionnaire.

Mr. BURKHEAD. You are talking about the August 1?

Mr. HEIMBURGER. The August cotton schedule; that is right.

In the first place, you ask the farmer in your question number 1 to estimate the condition of his cotton and to do it in terms of percentages. The farmers that I know are not used to estimating the condition of their crops in percentages.

If you meet a farmer on the street and ask him, "How is your crop?" I am sure he will not tell you, "I think it is about 85 percent." He will tell you that it is "Good" or that it is "Poor" or that it is the "Best crop" he has ever had or just about what it was last year. He will not talk in terms of percentages.

Mr. BURKHEAD. Does he ever say it is about half a crop or three-fourths of a crop?

Mr. HEIMBURGER. That is right. That is a very good way of describing it.

Mr. ABERNETHY. That is a very common expression.

Mr. HEIMBURGER. But he does it in that language. He will not say that it is about 50 percent. That is number 1.

Here you not only ask him to estimate his cotton and the conditions of his crop in terms of percentage, but you, also, ask him to estimate what percentage of the stand he has in terms of percent.

The two questions are only about an inch apart on this sheet, and you use two different criteria, two different formulas of percentage in those two questions.

In question number 1 you explain up above here that a normal or full yield is represented by 100 percent conditions, that yield per acre which you expect when the season is favorable and insects and diseases have caused little or no damage. But normal or 100 percent conditions may even be exceeded—you may have 110 percent condition of your crop.

I submit that that is just as confusing as it can be, to tell someone that he is to work in percentages when everybody knows that percentages go up to 100 or 1,000, depending upon whether you are talking about this kind of percentage or batting averages, and that is as high as they go. And yet here you ask the man to consider 150 as a

possible top. You suggest 115 in column 1, but when he gets over to column 3, 100 percent is the absolute top. And that is true with two or three of your other questions here.

I think, in other words, you are injecting uncertainties into this questionnaire that do not need to be there. I believe further that if you had descriptive terms in column 1, rather than percentages and would ask him to check, "Is it excellent, very good, good, poor, fair, half a crop, or a failure," that you would get information that you could interpret into percentages that would be much more reliable than the farmer's own guess as to whether it is 65 or 70 or 90 percent of a variable perfect.

Mr. BURKHEAD. I know of no way to ruin the crop-reporting service any faster than to do that—than to ask for that kind of information. You would never have any objective measurements of how or what "excellent" means or how close it is to the actual.

Mr. HEIMBURGER. I would not agree with you there. I think you could define that. I think you could say "Excellent"—better than any crop we have had; "Good"—as good as any crop you have ever had. I think you could define those.

Mr. BURKHEAD. It can be done and is done on many schedules where you want only narrative information, but where you are trying to get percentages or something which is objective to work with, you have to ask the farmer. The proof of the pudding is in the eating. Therefore, the proof as to whether he can report or not is to take a look at the way he does report.

These cotton reporters are not particularly the average run of farmers. Let us be honest there. You will find that a great majority of them have no trouble in reporting whether a stand is two thirds, three fourths, or normal, and they have no trouble in reporting the condition of the cotton.

Mr. HEIMBURGER. Apparently they must have some trouble, because when you were depending upon these things alone, on the 1st of August and the 1st of September, you reach an estimate which you yourself change very severely.

Mr. BURKHEAD. So does the farmer.

Mr. HEIMBURGER. Ordinarily, that is quite true.

Mr. BURKHEAD. The same farmer will come back and give you a different set of conditions a month from now.

Mr. HEIMBURGER. That is quite true, but you have no way of measuring how much of the change that you will make between August 1 and November 1 is due to a change in crop condition or how much is due to an error in the August report.

Mr. BURKHEAD. Our charts take care of those particular factors. That is, we do not care whether you report the condition of the crop 10 percent under what it is or 10 percent over, so long as the bias remains about constant.

Mr. HEIMBURGER. I understand that.

Mr. BURKHEAD. In other words, if you report the incorrect acreage 2 years in a row.

Mr. HEIMBURGER. I understand that over a long period of years by using your regression charts you can translate this very loose percentage figure in column 1 into something that resembles accuracy, but I still think you could translate it much more accurately if you

asked the farmer to describe it in terms that he is used to using as to the condition of his farm.

Mr. BURKHEAD. I admire your feeling, and if you can tell us how to do it, we would like to know.

Mr. HEIMBURGER. I will even write them out for you.

Mr. NEWELL. I would like to comment on that. I think that is a thing we ought to look at from a long-time standpoint.

You said the farmer is not used to reporting in terms of percent of the crop. I think the record over a large number of years shows that he does and that he does not do a bad job.

Mr. HEIMBURGER. That is only because you have correlated his answers in here on your regression chart.

Mr. NEWELL. That is right; that is the most convenient way he has for reporting. They report in terms of a percent of full crop. It does not make any difference whether your concept of a full crop is a little different than mine or Mr. Abernethy's or anybody else's, so long as we have a large number where our individual ideas do not change materially.

Over a long period of years this percent of a full crop or condition has been a pretty stable figure. The fact of the matter is your condition correlates fairly closely with your weather changes, changing conditions.

Changes in condition, particularly on a thing like pasture, correlates very closely with your weather change. I know it is confusing. It is a difficult thing to explain, because farmers will say that their idea of a poor crop is different from yours, and things of that sort, but I say as long as the things do not shift or the basic concept does not shift materially from time to time you get a stable figure.

Mr. HEIMBURGER. Would not the same be true if you were using descriptive terms?

Mr. NEWELL. No, sir, I do not believe so, because you have great difficulty with that. There is a wide range. You say "Excellent" and I say it, and does that mean 80 or 90 percent?

Mr. HEIMBURGER. We do not need to translate it in terms of percentage. You could define it.

Mr. SMITH. That is where the difficulty comes in, in our defining it. If we did define it, and defined "excellent" from 90 to 100, or 100 to 120, we still would have to establish the relationship of that definition or the averages of all of those definitions with what is actually happening or has happened in the past.

Mr. HEIMBURGER. That is what you statisticians would have to do with these things.

Mr. SMITH. We have tried to do that. Yes, that is true. However, here I think you get a narrower range in your interpretation.

Mr. HEIMBURGER. I will admit that for statistical purposes you have to translate "excellent," "good," "poor," and other descriptive terms into percentages or some numerical value when you get them in your office, but the farmer does not have to do that.

My only point is that I think that the farmer would more nearly report the condition that he believes his crop to be if he could do it in terms with which he is thoroughly familiar and which he would use every day in the week as he drives down the road and meets his fellow farmer.

Mr. SMITH. We have used that idea in our range reports for the western part of the country and we have not been very successful in putting those figures back into a numerical total that can be used, because "excellent" may be anywhere from 110 to 120 or 110 to 150. And we have to put an arbitrary value on the term.

Some years an "excellent" may mean 110 and another year it may mean 150.

You are better off to get the farmer himself to say whether it is 110 or 150 than for someone in the central office to put a value on it. I mean, we lose, I think, some of the precision in that sort of procedure.

Mr. HEIMBURGER. I will agree with you that in your top and bottom categories of "excellent" and "poor" or "failure" or whatever your bottom category would be that there should be some leeway there for the farmer to tell you how much better it is than it was before or how much poorer it is than ever before, but in between I believe that the ordinary terms he would use of "half crop," "poor," or "good," "fair stand," would come nearer to being accurate day after day and year after year than his percentage is.

Mr. SMITH. When you get an open-ended question on the schedule you run into tremendous difficulty getting it down to one figure. You have to ask him, first, if he has "excellent" prospects, and when you get a report of "excellent," what does he mean by "excellent."

Mr. HEIMBURGER. I do not think so.

Mr. SMITH. I think you do, otherwise you do not know what he is comparing it with.

Mr. HEIMBURGER. I do not feel that I should take any more time on this point. I think we can discuss this further. I think you can define it for him.

There is one more point that I would like to make on this green-blue sheet.

I understand that this is the first step in which weather is reported to you as affecting the crop. I would like for you to point out to the committee as you tried to do to me the other day where the instruction on here tells the farmer to take into consideration what he thinks the future effect of present weather might be.

Mr. BURKHEAD. Let us take a look at the schedule itself. The law says that we have to estimate the crop as of the first of the month, and the first question is, condition of cotton August 1 as compared with normal.

Up at the top under "Instructions" you will notice that it reads, the last sentence—

> In estimating the condition of cotton consider not only the growth and appearance of plants, but, also, all other factors which influence the probable yield per acre.

Mr. HEIMBURGER. As I said to you the other day, maybe to your informed and old cotton-crop reporter that means exactly what we are discussing, but it would not mean it to me.

Mr. BURKHEAD. It might not.

Mr. HEIMBURGER. There is nothing there that says that to me. Your cotton may be swell today, but there may have been weather factors for the past month that you know about that we do not know about that may affect the future yield of it. There is nothing on your question that tells me, if I were receiving it and were not sitting here

with you, to give you that judgment on my part. All it asks me for, so far as I can see by reading it, is the present condition of my crop today, what does it look like in the field, taking into consideration all of the things I know about. What is it today?

Mr. BURKHEAD. Roughly, that is what we ask for, what is the condition of the crop right now. And he takes into consideration, of course, and we mean primarily, what has happened so far, because he cannot forecast the future.

Mr. HEIMBURGER. He cannot.

Mr. BURKHEAD. Therefore, it takes into consideration that question of weather, we feel. We certainly would like to have your ideas and anyone else's on the wording of these schedules.

We assure you that schedule formulation is a science of its own. There are always ways of improving them, but this seems to get results. And this is the result of all of the experience of saying what is the condition on August 1, taking into consideration everything that you can think that has affected it so far.

Mr. HEIMBURGER. You do not mean to tell us that you are satisfied with your August 1 forecast—do you mean to imply that you are completely satisfied with the accuracy of the August forecast?

Mr. BURKHEAD. No, we are never satisfied.

Mr. HEIMBURGER. I just wanted to get that clear. You sort of implied that you were.

Mr. SMITH. I might add a comment there. I think our experience in the past, whether you can put your finger right on a specific measure of it or not, does indicate that the farmer when he is making this report as of August 1 or September 1 does take into consideration what he thinks the effect of the weather the next few days will be on his crop.

Mr. HEIMBURGER. Maybe he does, Mr. Smith. You do not specifically ask him for it here.

Mr. SMITH. We do not.

Mr. HEIMBURGER. As I read it, you do not. Maybe the old, experienced crop reporters know that you do, but I would not, if I received one of these.

Mr. SMITH. I think that you have in this a broader problem—I do not know whether you want to discuss it here or not—the problem of tying down the date to which your report relates. Whether the 1st of the month or the 5th of the month or the 10th of the month. That is one thing we have to watch. We do not attempt to give the farmer reporters a lead as to what the situation may be in the way of weather and so on a month from now which they have no way of allowing for.

Mr. ALBERT. We do not want to go on record as recommending a radical change in this system unless we are really able to stand responsible for it if we get them to do it.

Mr. HEIMBURGER. I am not recommending any change now, but I would like to have a big long lunch hour with these gentlemen sometime and thresh to over with them, because I am not convinced.

Mr. JONES. I want to make one comment. I think if this form was being filled out by every cotton farmer that your argument would have a lot of merit, but I think we have to consider the fact that over the years in developing this list of those who are now receiving these reports, I would say that they are the better-educated farmers in the community, because the fellow that is illiterate might be the finest

farmer and might not understand it, but I think that in sifting this list down, through their association with other crop reporters, and with the county agent and things like that, I think they are able to interpret that in percentages.

I know that in talking to my farmers, some of them do not have very much formal education, yet they can talk to me in terms of 85 percent or 80 percent and things like that. I was rather amazed to learn that some of them were able to do that.

So I think because of the long term that this has been in effect and the fact that it has been used so long, I would not agree with you that they cannot give that in terms of percentage now.

If it went to everybody I might agree with you, but the fact is that the thing has been going on for a long time, and I do not think it holds true as much as you seem to indicate.

Mr. HEIMBURGER. One of their problems is to get a broader basis of reliable reporting, I think. And it just seems to me that it might help to get more reliable reporters if they did use descriptive terms instead of percentages.

Mr. SMITH. The other item we have on here which also gives us an indication of future effects of conditions is the probable yield per acre and that is put on there for check purposes.

We feel the two of these questions used in combination should meet the type of thing that Mr. Heimburger mentions.

Mr. ALBERT. Do the farmers generally underestimate their yields?

Mr. SMITH. That is pretty difficult to answer.

Mr. BURKHEAD. There is more cash-crop bias in cotton.

Mr. NEWELL. If you approach it through the interpretation of the condition on your chart here I think you may get back to your answer.

Mr. BURKHEAD. You will find that is what we term bias.

Mr. ALBERT. An overestimate would still be a bias.

Mr. NEWELL. You have to take into account a number of things that show up in the long time correlation analysis on that. There are biases which vary within areas of the condition.

Mr. SMITH. Also, they vary with the time of the year. We have the experience that as you approach the time that the reporter is going to sell his crop or dispose of it, there is a tendency for him to be somewhat conservative in his estimate of yield. A little later after it is sold it may affect him somewhwat differently. Those are all taken into account in the charting of the past relationships.

Mr. ABERNETHY. All right, Mr. Burkhead, you may proceed.

Mr. BURKHEAD. We have two indications in August, one based on condition and one based on the probable yield.

Here again we convert these reported conditions and report probable yield per acre in terms of an index.

The reported condition is multiplied by the acres for harvest, times the weighted par yield.

Take a look at Form CEF 175, just ahead of the chart.

Suppose that the reported condition of cotton in this vicinity was 80 percent on August 1 and probable yield was 300 pounds. We take that reported condition, multiply it times the current acres for harvest which is, let us say, 3 million acres for harvest. How do we get that? We take the July 1 acres and take away from it the 10-year average abandonment. We have gone into that before. And then multiply it times the weighted par yield.

And on the back of this form you will find a question that the gentleman from Arizona, who is not here now, brought up a while ago of how we use these yields.

Par yield is nothing more than taking the yield for an individual year for a State and dividing it by the last reported condition for that year, which builds it back to 100 percent. That is getting back somewhat into your line of thinking, Mr. Heimburger.

You will notice that in working up this par yield we are taking into consideration the past somewhat by giving the par yield for the year just past a weight of 22 and the year before that 10 and so on, as shown on the back of Form CEF 175.

I would not worry myself too much about the par yield, except to understand that it is a 10-year average par yield, which takes into account the factors that have affected the yield in those years. The par yield when worked is put over on the front of the form there where it says, weighted 10-year average par yield.

Suppose for Mississippi that par yield is 500 pounds. We are going to work up a production index for August. That is what we are going to read off the first chart.

What we do is take this current condition of 80 times the current acres for harvest, multipled by the par first which is 500 and you have a 400-pound yield indicated for this year; 80 percent of your par yield gives you 400 pounds. The 400 times the 3 million acres gives you an indicated production index from condition of 1,200 million pounds. And that is read on this first chart.

You will notice here where the 1951 line fell. You will notice where it fell in the array of dots, quite a ways above the regression line.

The other indication is based on reported yield.

The reported yield here we said was 300 pounds; 300 pounds times the acres we say will be harvested. That is 3 million, which is the estimated July 1 acreage—that is why that is so important—less the 10-year average abandonment. That would be about 900 million pounds.

Mr. THOMPSON. How do you arrive at the mean line or whatever the line is that goes diagonally across the page?

Mr. BURKHEAD. You can take the proportional line through any one year or you can work out the mathematical regression line. This is the mathematical regression line here.

Mr. THOMPSON. Do you know that before you start?

Mr. BURKHEAD. Yes.

Mr. THOMPSON. Or is that put in after?

Mr. MORGAN. It is made on the basis of past years.

Mr. BURKHEAD. You cannot put the current year in because that is still in the field of uncertainty.

Mr. THOMPSON. That is, if all of your theories in all of the formulae were accurate, if everything went according to Hoyle, all of your dots would be on that line?

Mr. BURKHEAD. Right. Then you would have to make no more surveys.

Mr. SMITH. You would have no differences.

Mr. ABERNETHY. As I follow this testimony this morning, and I concede I am no expert, I am of the opinion that your formulae and your statistical method of arriving at the production and so on is, no doubt, as good as the best. I think this whole trouble goes back to

the method and manner of gathering the information at the ground level.

It just occurs to me that since you are going to use the same formula applied to these basic reports year in and year out, in my judgment, the trouble is not with the manner of calculating your forecast or your figures, but it goes back to the farm. I am not putting the blame on the farmer.

I am saying that it occurs to me that a more detailed report and more reports should be secured from the farmer.

Mr. BURKHEAD. I think you are absolutely right.

Mr. ABERNETHY. Do you agree with that or do you not?

Mr. BURKHEAD. Absolutely.

Mr. NEWELL. I think what you are saying, Mr. Chairman, is that——

Mr. ABERNETHY. I cannot say that these formulae are wrong— I do not know that they are— I cannot say they are wrong. I am going to presume they are the best. No doubt they are the best, but the information that comes in which after all is the backbone of the whole thing to which your formulae are applied, evidently, just is not the best information.

Mr. BURKHEAD. You are right.

Mr. ABERNETHY. That carries me back to some of Mr. Heimburger's questions. We are not trying to solve this thing here this morning, but maybe we can suggest some things as we go along.

I think that something ought to be done to get better and more accurate information from the farmers.

Mr. BURKHEAD. We need a better cross-section list.

Mr. ABERNETHY. There is no question about that.

Mr. BURKHEAD. Or, let me say, an improved cross-section list. There is no question about that. We recognize that fact.

Mr. ALBERT. It is a big job and takes a lot of money.

Mr. NEWELL. That is true. I think there needs to be a considerable amount of study, research, if you want to call it that, into some of the measures that might be applied. I think there is a need to look into some tf these other indications and some other methods that might be developed.

Mr. ABERNETHY. No one could discuss the matter of extending your figures except someone who had had experience in the field and someone who is skilled in it. Certainly, I am not.

It is a fact that the extended figure will be based on the accuracy of the information which you secure from the farmer.

Mr. NEWELL. Yes, sir.

Mr. ABERNETHY. I do not want to leave the impression that we can hold the farmer responsible for this in his reports. We have to hold ourselves responsible, because we are not getting the information from the farmer that we ought to have.

Mr. NEWELL. You have to concede this, also, that no matter what you do, what you would do on the 1st of August, you are not going to be able to eliminate all of the variations that will occur between the 1st of August and the time the crop goes to the gin.

Mr. ABERNETHY. That goes back to Mr. Thompson's letter that he received, so that I think that it might not be a bad idea to eliminate August.

Mr. NEWELL. Or September or any other month, because variations occur? If I knew a way to take care of them I certainly would be doing it now.

Mr. ABERNETHY. Does the law require forecasts at certain specified months?

Mr. NEWELL. They are spelled out.

Mr. ABERNETHY. Spelled out in the law.

Mr. NEWELL. The point I wanted to get across was that I am not saying that I think we have everything perfect. I do not believe that for a minute. I think improvement can be made, but I did not want you to feel that there was anything that you could do that would eliminate all the variation that would take place between the 1st of August and the 1st of September or the 1st of October and the final estimate. I do not know how to do it, because the weather is going to change.

Mr. ALBERT. And the price will change.

Mr. NEWELL. Yes. There will be numerous variations that will come in to affect any forecast that might be made.

I just wanted to make that point.

Mr. BURKHEAD. The August forecasts have been within 3 percent of the final half of the time in the past 16 years. Cotton is relatively more advanced on August 1, much more so than corn is on July 1. As Mr. Newell pointed out, we are being hounded all the time for earlier estimates. They ask for us to give them an idea, that they do not care how close. Seeds is an excellent example, a small industry. They want forecasts earlier and earlier. They say, "We do not care if you miss it 50 percent. We know that you cannot call it right all the time, but you can call it nearer correct than we can."

Mr. ABERNETHY. Let us move on to September. What information do you secure in September that is any different from that in August?

Mr. HEIMBURGER. I think that we might go into this question of a research unit which was discussed somewhat at a previous meeting. I think they all agree with the need of a research unit down there within their own bureau which could study these things and which would have no responsibility for making forecasts, but would simply study the techniques, the procedures, the forms in an effort to improve the operations of the various operating units in the agency.

Mr. ABERNETHY. They do that themselves.

Mr. HEIMBURGER. They do. But they have to make 500 crop reports a year, and they do not have much time between those 500 crop reports to sit around and analyze what they have done.

I thought in connection with your idea of studying these things, to get more accurate information, that might be brought out, that they do not at the present time have the money to have an independent research unit in their own bureau.

Mr. ABERNETHY. Suppose you distinguish between your September and August reports.

Mr. BURKHEAD. The only difference is that in September we have an actual indication of the abandonment that has occurred since July 1.

We work the same kind of indexes from yield and condition as I just showed you, except it is information brought up to date, of course. We estimate the abandonment that has occurred in acreage since

July 1 and take that away from the July 1 acreage in cultivation and arrive at a new acreage for harvest in September which replaces that 3 million up there for Mississippi that we mentioned a while ago. It might be 2.8 now or 3.1. Otherwise, the process is the same.

October is next.

In October we again have the reported condition of the crop and the probable yield. And we have bolls safe.

We have the same kind of index worked from condition and probable yield that we have for August and September.

In addition you will notice a cotton-gin card which we begin to use for the first time. That card asks for two things, how many bales of cotton were ginned prior—in this case October 1—about how many more bales do you expect to gin.

Mr. ABERNETHY. That card goes to every ginner in the belt?

Mr. BURKHEAD. Yes, sir.

Mr. ABERNETHY. Does this go to the farmer or the gin?

Mr. JONES. You do not send it to the farmer.

Mr. BURKHEAD. It goes to all ginners.

Mr. ABERNETHY. In the belt?

Mr. BURKHEAD. Yes, to all of them, but we do not get back in time for use over about 65 percent, as you will notice on the chart showing the percentage return.

Mr. ALBERT. What about the cotton census report?

Mr. BURKHEAD. This is it.

Mr. ALBERT. That has been taken by individuals who go out and get it and write it down and send it in by a certain date.

Mr. BURKHEAD. Yes. We have an arrangement with the Census people as we mentioned once before. It is in order to avoid duplication that we do this. We used to send a card ourselves from our State statisician's offices to these ginners asking for the same information.

Mr. ABERNETHY. The Census Bureau information gets in too late, does it not?

Mr. BURKHEAD. No.

Mr. ALBERT. They take it every month?

Mr. BURKHEAD. Yes, sir.

Mr. ABERNETHY. They have eliminated the county census.

Mr. BURKHEAD. They have, yes. They have regional offices.

Mr. ABERNETHY. It is done by mailing cards to the gins.

Mr. BURKHEAD. Some of it is.

Mr. ABERNETHY. The Census people do that themselves.

Mr. BURKHEAD. Right.

Mr. ABERNETHY. And you mail a card to the gins?

Mr. BURKHEAD. No. We used to. We do not do it now.

Mr. ABERNETHY. What is this card now?

Mr. BURKHEAD. This is the card that the Census people use.

Mr. ABERNETHY. You do not use the card, the Census people only use it?

Mr. BURKHEAD. As I say, we used to mail this card ourselves to the ginners, and the Census people went ahead and did their business, too, used the same kind of card, roughly.

The Budget Bureau asked us to get together and eliminate one of them. So we eliminated our card and had the Census people step up their work so that we could get a sample of gin reports every month,

October through December, like we had been getting before. We get more gin reports now.

Mr. ABERNETHY. Let me start over. Here is a card entitled, "Cotton Ginned From Crop of 1951 Prior to October 1." Who mails out this card?

Mr. BURKHEAD. The Bureau of the Census.

Mr. ABERNETHY. They are mailed out monthly?

Mr. BURKHEAD. Yes, sir.

Mr. ABERNETHY. And do I understand you to say they get back only about 65 percent?

Mr. BURKHEAD. They get them all back, eventually, but for our information which must be in our hands the 3d or the 4th of the month they give us the cards they have in hand by that time, by telephone, by mail, any way they get them.

Mr. ABERNETHY. Before they inaugurated this new system of just gathering the information from the district offices they used to gather this information by enumerators in each county?

Mr. MORGAN. That is correct.

Mr. ABERNETHY. Did you get a better report then, than you do now?

Mr. BURKHEAD. We do not think so.

Mr. MORGAN. We were getting about 37.5 percent return of all gins at that time.

Mr. ABERNETHY. You mean when they had the county enumerators?

Mr. MORGAN. When we mailed them out to the ginner, when we were overlapping the census work.

Mr. ALBERT. How many did you get when they began to give you county enumerators' work?

Mr. MORGAN. About two-thirds of them.

Mr. ALBERT. Since they put it on a district basis, have they quit giving you detailed reports?

Mr. MORGAN. No. The Census Bureau put in the district regional business several years ago. You might say that we tapped into this over-all census process, either through the district or the agents that they still have. They give us back a duplicate copy of the card for all gins that they receive by the 3d or the 4th of the month. They go ahead and complete their survey and use it for bales ginned to date for all gins, and we use their total bales ginned to date in our final analysis.

May I add that the general policy is that they have district offices that cover counties within, say, a radius of 100 miles of that office. Then for certain outlying counties where mail service is not too fast they still have a cotton agent who enumerates the gins in those counties.

Mr. ABERNETHY. But there are very few counties that have a cotton census reporter?

Mr. MORGAN. We have more in Texas and Louisiana than in any other State.

Mr. JONES. Am I to understand, though, that you do not get a complete ginning report from all of the gins?

Mr. BURKHEAD. We do later, in the census report of bales ginned to date.

Mr. JONES. What is that 65 percent?

Mr. BURKHEAD. The gin reports that are received in time for the initial preparation in the State offices of each cotton report. They have got to cut off about the night of the 3d or 4th and they use all of the gin reports that the census people have gotten back or have in their possession up to that time. Sometimes they are phoned over to the State statistician's office. Most of the time they will send duplicate cards. As it says here, this information is going to be used by the United States Department of Agriculture for statistical purposes only. That is mentioned on the card itself.

They go ahead and complete their report in order to have it ready for release simultaneously with our report. The Bureau of the Census then reports for all gins, Mr. Jones.

In our initial use we only have time to wait for about two-thirds, up to the 4th, but on the 8th they have the rest of them. And we then have the benefit of the actual total cotton ginned up to the first of the month for all gins in our final calcualtion.

Mr. ABERNETHY. You issue your report on the 8th of the month?

Mr. BURKHEAD. Yes.

Mr. ABERNETHY. When you issue your report have your worked into that all of the cotton that has been ginned up to the 1st of the month?

Mr. BURKHEAD. Yes; we have.

Mr. ABERNETHY. Then you do have the benefit of the 100 percent report up to that time?

Mr. BURKHEAD. I see what you mean. In Washington, yes, but not in each field office.

Mr. MORGAN. For the bales ginned to date. We do not have it 100 percent for the expected ginning after that date.

Mr. BURKHEAD. He said bales ginned to date.

Mr. NEWELL. That comes in to us just a little while before the report is released, in time to be used in the final check inside the lock-up. You see, under the law the Bureau of the Census releases their reports simultaneously with the crop report.

Mr. ABERNETHY. What I am trying to find out is whether or not you have been handicapped in the elimination of these agents in the county.

Mr. BURKHEAD. Generally speaking, no. We have a few rough spots yet, but we are cleaning them up.

We have this ginning information and we work it as I said before, along with the same condition and yield indexes as we have for the other 2 months, except the information is up to date.

For ginners we work up the percentage ginned to date from which we work up two production indexes from ginners' reports, one based on the ginners' information as reported and another based on the statistician's recommendations corrected, gentlemen, for the final census ginnings to date as brought in to the lock up, as mentioned by Mr. Newell.

That is a little involved.

Here is the way we work the production from the ginners' information. We have to do two things first.

We have to estimate the amount of cotton that has been ginned to date for all gins, even though we only have this two-thirds sample.

Mr. ABERNETHY. Let us sum that up in one question. Is there any room, in your judgment, for improving your monthly reports by

improving the information that you get from the gins, or are you satisfied with the information coming from the gins?

Mr. BURKHEAD. We are generally satisfied except for a few rough spots and except that we feel we could improve our forecasts in August and September if we had, at least, from the two-thirds sample of ginners, information on bales ginned to date (even if zero) and bales they still expect to gin. This would give us a separate indication, independent of our own surveys. That is, if the ginner will report what he thinks the crop will be on August 1 and again on September 1—it gives us a clue, Mr. Abernethy, as to which way these ginners think the crop is going.

At the moment we do not have any information from ginners as of those dates, because the Census Bureau does not, by law, have to make an enumeration except where cotton ginnings are going on. They do, of course, in south Texas.

We feel that if we could work out an arrangement with the Census Bureau to get a good sample from the gins in August and September we would have an excellent indication for those 2 months.

Whether we can do that now, we do not know.

In November we have another cotton schedule that goes to the same list that got the schedule in October, roughly. We ask for the condition again. We ask for the probable yield again, and the bolls safe.

And we work again the condition and yield indexes that we mentioned before. Again we have the census ginners' information.

The card looks like the first one you saw over here, bringing the information up to date, ginned to October 1. That cuts down the number of bales to come and increases the efficiency of your indication. Those charts are read as before.

Are there any questions on November?

Mr. ABERNETHY. No, sir.

Mr. BURKHEAD. What do we do or have in December? Again in December we reappraise, resurvey acreage and production prospects completely across the board.

We again have this acreage card. It looks like the June card, except this goes out after the crop has been made.

We have another card here called "Acreage and production of crops."

You will notice the very first question is cotton, in the Cotton States. I have the Texas card.

We get harvested acreage and production, primarily, from this A and P card, the second one, and we call it the A and P card because it is acreage and production. It gives an indication of yield per acre: the total production divided by acres harvested.

Then we have the December cotton schedule. That has on it the probable yield per acre and what percentage of the cotton acreage in cultivation July 1 has been abandoned since July 1, question No. 3 on that schedule.

Then we have acreage information on the second part of the schedule, questions 4 through 7, cotton harvested this year, cotton harvested last year, and bales of cotton you expect to make this season and total land in farms.

There again we work indications of acreage just like we did in July and June.

Mr. ABERNETHY. Are these schedules compared in your State offices?

Mr. BURKHEAD. Yes, sir. This information is all in the State offices.

Mr. ABERNETHY. Where is it filed?

Mr. BURKHEAD. In the State offices in each State.

Mr. ABERNETHY. In each State office?

Mr. BURKHEAD. Yes.

In December we reinforce this regular cotton list. You will notice that for this cotton schedule in December, because it has acreage on it, we increase the number of schedules mailed out considerably. It generally takes a larger sample to estimate acreage than it does yield per acre and condition. And that might well be explained.

Mr. ABERNETHY. I think that is understandable. I will be glad for you to go into it, however.

Mr. BURKHEAD. I will just take a minute.

Here is Mr. Jones' Missouri territory down here. Here is a small cotton area. He has a homogeneous territory. One fellow reporting the condition of 80 will cover a relatively big area. The same thing for yield. Every individual can change his acreage by a different percentage. Therefore, you have to have a bigger sample on acres to stabilize this fact than on conditions.

In December we go through the same general procedures as we do in July, except we have the production estimate to make.

We have ginners' reports again in December. Of course, most of the cotton is ginned by then. And that increases the efficiency of the ginners' indication. Naturally, the December forecast is usually pretty close to the final. It has been missed on occasion, because the cotton which was produced was not ginned. Our job is to estimate ginnings and not production.

Is there any question on December?

Mr. ABERNETHY. I do not have any.

Mr. BURKHEAD. We are through a season, but in order to take full advantage of final ginnings or practically so, we make what is known as the end of the season report.

We send out a cotton schedule. You will notice it here. One is blue and one is yellow.

Why are there two schedules? One goes to the humid part of the cotton area and one to the West where you have long staple cotton.

We reappraise all indications that we got for the previous year, that is, in May of each year after the season is over. Come this May we will reappraise all of the work we did for the 1951 crop, having available from the Bureau of the Census practically final ginnings and the information from this survey here. We more or less sew up the final outcome of the 1951 crop. Why? Because it is important to be sure we have the previous year's acreage right—production is, normally, of course, nearly correct—because that will become the basis on which the 1952 crop forecasts will start.

So we try to be sure that we get the acreage level right for the previous year, because if we are off there, we can estimate the change for the current year correctly and still miss the actual acreage.

That, gentlemen, about winds up the job.

We would be glad for you, any of you, to come down to the Department and to explain to you in more detail as to how we do the job.

Mr. ABERNETHY. Thank you very much, gentlemen.

We will stand adjourned.

(Whereupon, at 12:10 p. m., the special subcommittee adjourned.)

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